THE DEVELOPMENT AND APPLICATION OF TEXT-FOCUSED METHODS FOR EVALUATING ACCOUNTING NARRATIVES, WITH A VIEW TO INVESTIGATING IMPRESSION MANAGEMENT

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Abstract

This study responds to a call in the literature for methodological and empirical studies to advance research into accounting narratives.

The primary contribution is methodological, drawing on the literature of applied linguistics and that of managerial business communications, in developing for accounting applications three text-focused methods for evaluating accounting narratives. This expansion in the portfolio of approaches available to the accounting researcher offers the potential for a richer empirical analysis, demonstrated in this study through an illustrative empirical application.

The methods are developed in light of acknowledged areas of weakness and gaps in the accounting literature and with a view to investigating impression management. A general line of critique in the accounting literature points to a lack of emphasis on the syntactic dimension, with a particular focus on the weaknesses of readability formulas as the dominant method of syntactic analysis. The particular orientation towards the investigation of impression management recognises the increasing importance in the literature of issues associated with impression management in accounting narratives. The aptitude of the methods developed for investigating impression management is demonstrated through an illustrative empirical application in tests of differentiation between 'good performers' and 'poor performers'.

A texture index and a transitivity index go some way towards redressing the general lack of emphasis on the syntactic dimension, exhibited in the existing portfolio of approaches. The texture index is developed as an alternative to readability formulas, is response to the particular focus of critique. The texture index analyses text across a number of dimensions or indexicals and embodies a number of features, which render it attractive to accounting researchers. The transitivity index measures the number of passive constructions in a text, a textual dimension associated with causation and attribution, with a particular relevance to the investigation of impression management.

The third approach outlined in this study is *DICTION* analysis, a computerised content analysis program, which examines a text for its verbal tone, measured across five variables: 'certainty', 'optimism', 'activity', 'realism' and 'commonality'. This approach is selected principally because of its relevance and applicability to the investigation of impression management.

The texture index is drawn from the applied linguistics literature. It has not previously been used in an accounting related application. The transitivity index and *DICTION* analysis are developed from the managerial business communications literature where both approaches have been applied, albeit to a limited extent, in accounting applications. Both of these approaches have a sound theoretical basis in linguistics. In developing these approaches from the managerial business communications literature, there are two main areas of contribution. First, the methods developed here have hitherto only been exploited to a limited extent in accounting applications. This study advocates the development of the methods in accounting related applications towards their full potential. Second, the methods are developed and adapted as appropriate with the expressed intention of investigating impression management in accounting narratives.

In addition to the methodological contribution, the study also yields an empirical contribution through the empirical application. The study finds mixed results in relation to an investigation of differential reporting patterns in the Chairman's statement and 'OFR type' Manager's report of 'good performing' and 'poor performing' investment trust companies. Extending the analysis beyond the traditional focus on the Chairman's statement to include the Manager's report, recognises the increasing importance of such 'OFR type' documents and the relative lack of attention they have received hitherto from accounting researchers. The results are reported in light of a detailed synthesis of the empirical impression management literature that is included in this study. As far as the author is aware, this is the first detailed review of this nature in the literature. The study also finds mixed results in relation to differentiation between the Chairman's statement and Manager's report.

Finally, the study fosters an ethos of interdisciplinarity between research communities in accounting and the communities of applied linguistics and managerial business communications. Such interdisciplinarity offers the accounting researcher insights and

usable methods of analysis, developed in disciplines whose specialism is the evaluation of narrative.

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DEDICATION

This thesis is dedicated to four people, without whose prayerful support and encouragement it would never have been completed.

Sally

My Parents

Tom

Above all, and this I know is their prayer, it is dedicated to the glory of God and to the Lord Jesus Christ; that He would use all that I have learned through these years of study, for the purpose that as yet only He knows.

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Two papers from this thesis have been published or have been accepted for publication in the *Accounting, Auditing & Accountability Journal.* I am grateful to Professor Lee Parker (Journal Editor) and Professor John Courtis (Editor of a Special Issue on New Worlds of Communication in Accounting), as well as four anonymous reviewers, for their constructive comments.

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LIST OF PUBLICATIONS

Elements of this thesis have been published or are have been accepted for publication as follows:

Chapter 5: The Texture Index: An Alternative to Readability Formulas

A paper outlining the texture index approach was published in the ***Accounting Auditing & Accountability Journal***. The paper was published in the section of the journal entitled 'Methodological Themes'. The paper was co-authored with the doctoral supervisor, Professor Pauline Weetman. The theoretical and methodological dimensions of the paper, which concerned the development of the texture index approach was entirely my own work. Professor Weetman's contribution to the paper was the data relating to the Operating and Financial Review, used to illustrate the method. The data used in this thesis for the illustrative accounting application is different.

The paper was awarded an *ANBAR* citation of excellence for research implications.

The full citation is as follows:

R. Sydserff and Weetman, P. (1999) "Methodological themes. A texture index for evaluating accounting narratives: an alternative to readability formulas" *Accounting, Auditing & Accountability Journal*, Vol. 12, No. 4, pp. 459-488.

Chapter 6: A Transitivity Index and *DICTION* Analysis
Chapter 7: An Illustrative Accounting Application

A paper outlining the transitivity index and *DICTION* analysis has been accepted for publication in the ***Accounting, Auditing & Accountability Journal***. The paper will appear as part of a special theme issue of the journal, entitled 'New Worlds of Communication in Accounting.

The full citation is as follows:

R. Sydserff and Weetman, P. "Developments in content analysis: a transitivity index and *DICTION* scores" *Accounting, Auditing & Accountability Journal*, Theme Issue on New Worlds of Communication in Accounting (forthcoming).

Chapter 3: Review of Literature:
Empirical Studies Investigating Impression Management in Accounting Narratives in Corporate Reports

A summary of the literature review included as chapter 3 in this thesis, was incorporated in a paper published in the ***Pacific Accounting Review***. The paper was co-authored with Professor Jim Haslam, Professor Sonja Gallhofer and Stephen Morrow. The particular section of this paper, which corresponds with chapter 3 of this thesis, is section 2, entitled 'Spin Accounting'. This section was entirely my own work.

The full citation is as follows:

S. Gallhofer, J. Haslam, S. Morrow and Sydserff, R. (2000) "Accounting, transparency and the culture of spin: re-orienting accounting communication in the new millennium, *Pacific Accounting Review,* Vol. 11, No. 2, pp. 97-112.

Chapter 1: Background, Objectives and Overview of the Study

The material included in section 1.4 of the introductory chapter has been incorporated in a text-book. The book was co-authored with Professor Pauline Weetman and Paul Gordon (Heriot-Watt University). The particular section of the book, which corresponds to section 1.4 of the introductory chapter here, is section 7.10, entitled 'Issues in audit reporting'. This section was entirely my own work.

The full citation is as follows:

Sydserff, R., Weetman, P. and Gordon, P. (2000), *Issues in Accounting: Auditing*, Heriot-Watt University Programme of Management Education, Heriot-Watt University and FT Knowledge.

CHAPTER 1

INTRODUCTION

1.1 Introduction

Developments in the financial reporting environment have resulted in the increasing importance of the accounting narrative as a means of communicating financial information. The emergence of the accounting narrative reflects a shift in emphasis from the financial statements to the wider documentary context of the corporate report, with the increasing importance of graphical, pictorial and narrative reporting (Hopwood, 1996). This shift has been reflected in the development of regulatory guidance, both for the preparation and the audit of accounting narratives.

In light of these developments, it is perhaps somewhat surprising that there has been relatively little research into accounting narratives when compared to the statutory financial statements (Hopwood, p. 55). The importance of research into accounting narratives is further emphasised by an increasing body of evidence, which suggests that managements are not neutral in their presentation of narrative information and engage in impression management tactics (Gallhofer *et al.*, 2000).

In a watershed review of empirical research of accounting narratives, Jones and Shoemaker (1994) pointed to the urgent need for methodological and empirical research to advance the literature. This study responds directly to Jones and Shoemaker's call and, in particular, to the need for the development of methods to expand the existing portfolio of approaches.

1.2 Objectives of the research

The general objectives of the study are set out in section 1.2.1. These are developed into specific objectives in section 1.2.2 and stated concisely in Table 1.1. Through the literature reviews in chapters two and three, specific research questions are developed in order to pursue the objectives of the study. These research questions are stated in section 4.2 and Table 4.1. For completeness and to provide an overview of the study, the research questions are reproduced with some discussion in this introductory chapter (section 1.6 and Table 1.4).

1.2.1 General research objectives

In recognition of the increasing importance of the accounting narrative as a medium for financial reporting, the research aims to make a contribution to the existing literature on accounting narratives by developing methods of evaluation that will complement existing methods and facilitate a richer empirical analysis. The methods are developed with reference to the literature of applied linguistics and that of managerial business communications. All of the methods developed have a sound theoretical basis in linguistics. In developing these methods for use by accounting researchers, the study recognises the emergent impression management literature and the particular requirements of accounting researchers investigating impression management. Accordingly, the methods will be developed with a view to investigating impression management. In addition, the research aims to make a contribution to the empirical literature.

1.2.2 Specific research objectives

Four specific objectives are developed from the general objectives outlined in section 1.2.1. The specific objectives are stated in Table 1.1. These are in turn categorised as primary and secondary.

Table 1.1
Specific research objectives

Specific research objectives:
Primary research objective:
1. In response to areas of weakness and gaps identified in the literature, to develop text-focused methods of evaluating accounting narratives, which can be used by accounting researchers investigating impression management.
Secondary research objectives:
2.1 To investigate whether the narratives of 'good performers' and 'poor performers' exhibit differential reporting patterns.
2.2 To investigate whether different accounting narratives exhibit differential reporting patterns.
2.3 To synthesise the empirical literature in relation to the investigation of impression management in accounting narratives in corporate reports.

1.2.2.1 Primary research objective

The primary research objective is to develop text-focused methods of evaluating accounting narratives, which can be used by accounting researchers investigating impression management. These methods will be developed specifically in the context of areas of weakness and gaps identified in the literature, which might potentially be exploited. The development of text-focused as opposed to reader-focused methods reflects the dominance of text-focused methods in the accounting literature, in particular the methods used to investigate syntactic and thematic content. Text-focused methods are concerned with examining features of the narrative and involve no direct reader involvement in the evaluative process (Schriver, 1989). By contrast, reader-focused methods involve direct reader involvement. The methods will be developed in light of recognised methodological assessment criteria in the literature.

In light of an increasing body of evidence, which is suggestive of the view that managements engage in impression management tactics in their discretionary narrative disclosures, the methods will be developed expressly with a view to investigating impression management. In particular, the methods will be developed cognisant of the research designs and measurement models used by accounting researchers in such

investigative studies. An illustrative empirical application will demonstrate the aptitude of the methods for investigating impression management.

1.2.2.2 Secondary research objectives

Three secondary research objectives are identified in Table 1.1. While the primary research objective can be regarded as methodological, objectives 2.1 and 2.2 are empirical. Objective 2.1 will investigate whether the narratives of 'good performers' and 'poor performers' exhibit differential reporting patterns, as evidence of impression management. Objective 2.2 will investigate whether differential reporting patterns are evident in different accounting narratives. These research objectives will be pursued through the illustrative empirical application whose primary purpose, as stated above, is to illustrate the appropriateness of the methods for investigating impression management. The empirical analysis will yield some interesting insights both in relation to the accounting narratives of UK companies and in relation to narratives other than the Chairman's statement. Both of these areas have received relatively little attention in the literature.

Objective 2.3, although related to the other research objectives, can be regarded as a separate and distinct objective. To date, as far as the author is aware, there has been no published comprehensive review of empirical studies investigating impression management in accounting narratives in corporate reports. This study contributes such a detailed review.

1.3 Categorisation of literature and definition of terms

It is helpful here to clarify what is meant by the term 'accounting literature' as it is used in this study. The term is used with reference to the perspective from which the particular study is written, rather than, for example, the particular journal in which the study is published or the nature of the data that is used in empirical application. Classification by journal would be problematic given the fluid nature of the impression management literature. For example, *The Journal of Business Communication* has emerged as something of an interface between the accounting and managerial literatures. Although this journal has a clear overall managerial orientation and a scope that encompasses the whole realm of business communication, it does contain a number of studies, which embody an accounting rather than a managerial perspective. In terms of the approach to classification adopted in this study, these are classified as 'accounting literature'.

Classification in terms of data used in empirical application would also be problematic. Again, *The Journal of Business Communication* can be used to illustrate this. A number of studies are included in the impression management literature review in chapter 3, precisely because they use accounting data to investigate impression management. Although investigating accounting narratives, in terms of the approach to categorisation adopted in this study they are not classified as 'accounting literature'. This is because those studies are written from an applied linguistics or managerial perspective. One of the specific contributions of this study will be to identify such text-focused methods in the managerial literature which offer potential to accounting researchers investigating impression management, and to develop these methods for use in accounting applications. Such development is necessary, because the methods, as they are currently used in the literature, are not oriented specifically towards the requirements of accounting researchers. The distinctions in terms of categorisation summarised here will be referred to in more detail in the relevant sections of the study as they arise.

In terms of terminology, the terms 'text' and 'narrative' will be used interchangeably throughout the study. The use of a single term is problematic, principally because the terms are used interchangeably in the literature referred to in this study. It is not considered necessary to adapt the terminology when referencing this literature.

The terms 'method' and 'methodological' are used in this study in a particular way. The study is not concerned with the nature of method *per se*. Rather, the term 'method' is used to refer to the existing approaches to text evaluation in the literature, along with the methods developed in this study. The term 'methodological' is used in relation to the overall orientation of the study in the sense of developing methods to expand the portfolio of available approaches. The phrase 'methodological critique', used a number of times in the introductory chapters, again embodies a particular rather than a general meaning. The sense implied here is the critique both of existing methods and the methods developed in this study.

Finally, the terms 'syntactic dimension' / 'syntactic analysis' and 'thematic dimension' / 'thematic analysis' will be used throughout the study. The terms are derived in the context of the literature reviews in chapters 2 and 3. They are used to refer to the particular textual dimension that is, for example, the focus of attention for a particular research method. The 'syntactic dimension' and 'syntactic analysis' are terms predominantly associated with readability and readability formulas. The 'thematic

dimension' and 'thematic analysis' are associated with thematic content and the form-oriented and meaning-oriented approaches to thematic content analysis.

1.4 Need for research into accounting narratives

The need for research into accounting narratives is widely acknowledged both in the academic literature (e.g. Jones and Shoemaker, 1994; Hopwood, 1996; Froud *et al.*, 1998; Llewellyn, 1999; Gallhofer *et al.*, 2000; Smith and Taffler, 2000) and in the professional literature (e.g. Jones, 1996a; Clatworthy and Jones, 1997; 1999; Sydserff, 1998). Two particular dimensions or facets can be identified, as providing the impetus for this need for research. First, the increasing importance of the accounting narratives as a means of communicating financial information, and second, an increasing body of evidence, which is suggestive of the view that managements engage in impression management tactics in their discretionary narrative disclosures. Sections 1.4.1 and 1.4.2 respectively, reflect on these issues. The justification here for the need for research into accounting narratives concludes with an overview of the regulatory environment. Reflecting on both accounting and auditing regulation raises the question as to whether the emerging dynamic of the financial reporting environment, particularly in the wider documentary context of the corporate report, is adequately addressed in the regulatory framework.

1.4.1 Increasing importance of accounting narratives

The accounting narrative has long been established as an important constituent in the financial reporting structure, in particular, the Chairman's statement or President's letter, which has endured as the most widely read section of the annual report (e.g. Courtis, 1982; Parker, 1982; Jones, 1988; Harte *et al.,* 1991; Epstein and Pava, 1993; Subramanian *et al.,* 1993; Bartlett and Chandler, 1997; Courtis, 1998; Smith and Taffler, 2000). That said, the emphasis in financial reporting has been weighted towards the financial statements. Recent developments, however, are indicative of a fundamental shift in balance from the financial statements to the wider documentary context of the corporate report. Hopwood (1996) refers to this shift as a "radical transformation", where "the rather minimal and legalistic exercises in financial statistics have been replaced by often flamboyant documents which mobilize, in increasingly creative ways, text and visual images alongside the accounting data of old" (p. 55). Two studies in a UK context indicate the emerging dominance of the accounting narrative. First, a survey by the accounting firm Arthur Andersen (1996) found the narrative pages in UK corporate reports to be equal in length to the statutory financial

statements. Second, Rogers and Grant (1997), comparing annual report content with sell-side analyst report content, conclude that the narrative sections of the annual report provide almost double the amount of quoted information compared to the financial statements.

Developments in narrative reporting are evident in the emergence of discursive and analytical narratives such as the UK Operating and Financial Review (OFR). Accounting narratives of this type trace their origins to the US Management Discussion and Analysis (MD&A). In the US, the requirement for narrative disclosure is mandatory. The Securities and Exchange Commission (SEC) requires publicly quoted companies to augment GAAP based accounting information with narrative disclosures. The SEC's justification for these disclosures, known as Management Discussion and Analysis (MD&A) is expressed as follows:

> The Commission has long recognised the need for a narrative explanation of the financial statements, because a numerical presentation and brief accompanying footnotes alone may be insufficient for an investor to judge the quality of earnings and the likelihood that past performance is indicative of future performance. MD&A is intended to give the investor an opportunity to look at the company through the eyes of management by providing both a short and long-term analysis of the business of the company (SEC, 1987).

These sentiments find expression in the ASB's Statement of Best Practice entitled *Operating and Financial Review* (ASB, 1993). Referring to "the increasing complexity of many businesses", the Financial Reporting Council (FRC) perceived "a growing need for annual reports to include an objective discussion that analyses and explains the main features underlying the results and financial position" (preface). The document includes a number of recommendations as to the structure and scope of the narrative, although a degree of latitude is left to the preparer. Perhaps of particular relevance to the discussion here are what might be referred to as the principles of narrative reporting, encapsulated in the document. The document states that the narrative "…should be written in a *clear style* and as *succinctly* as possible, to be *readily understandable by the general reader of annual reports*…It should be *balanced and objective*, dealing *even-handedly with good and bad aspects*" (para. 3, emphasis added).

Although compliance with this statement of best practice is currently not mandatory like the MD&A requirement in the US, the OFR has become a standard feature of generally accepted accounting practice in the UK (Davies *et al.*, 1999). Proposals from the

Department of Trade and Industry recommend that OFR compliance be made mandatory (DTI, 2001, xix). This recommendation is included as part of a detailed company law review project in the UK, a project that is the result of an extensive process of research, collaboration and consultation. The proposal for OFR mandatory compliance is indicative of an emerging consensus as to the centrality of *narrative* reporting in the contemporary and future financial reporting environments. In an important discussion document produced by the research committee of the Institute of Chartered Accountants of Scotland, entitled *Business Reporting: The Inevitable Change*? (Beattie, 1999), reference is made to "widespread agreement that non-financial measures of performance and forward-looking information will feature increasingly in the external reporting package" (p. 20). Similar sentiments are expressed in the ASB's discussion paper, *Year-End Financial Reporting Structure* (ASB, 2000).

In addition to these policy shaping reports, a number of reflective papers in the academic literature attest to the importance of accounting narratives in the future financial reporting environment (e.g. Beattie, 2000; Dyckman and Zeff, 2000; Gallhofer *et al.*, 2000). Beattie argues that as financial reporting evolves into 'business reporting', with an increasing emphasis on forward-looking, non-financial and soft information, the emerging textual, graphical and visual media will become increasingly important. The other studies referred to were published in the *Pacific Accounting Review* as part of a special collection of millennium essays on the future of accounting. Dyckman and Zeff argue that "future developments in financial reporting…will need to be in the form of expansions beyond the basic financial statements, as we know them" (p. 89). In this regard, they point to an expansion in MD&A type narrative disclosures as an appropriate medium for embracing these future developments (p. 90). Gallhofer *et al.* see narrative reporting as an important constituent of the financial reporting model they advocate, an approach which sees a fuller integration of numerical, textual and visual disclosures. Moreover, they argue that full audit rigour should be applied to accounting narrative and make a number of suggestions as to the nature of such attestation (p. 103 (see also section 1.4.3 below)).

The policy documents, discussion papers and academic literature referred to above, are framed in the context of a dynamic financial reporting environment that is embracing the challenges of Internet reporting. A specialist literature is emerging exploring the opportunities and threats of this environment (see e.g., Ashbaugh *et al.*, 1999;

Debreceny and Gray, 1999; 2000; Deller *et al.*, 1999; Lymer *et al.,* 1999; FASB 2000; Richardson and Scholz, 2000).

It is clear from the discussion in this section that the narrative reporting medium is central to the contemporary and future reporting environments. In light of this discussion, it is perhaps surprising then, that narratives like the OFR have received relatively little research attention. Section 3.6.1.1 identifies only seven such studies (Weetman *et al.,* 1994; 1995; Arthur Andersen, 1996; Weetman and Collins, 1996; Kirk, 1997; Schleicher and Walker, 1999; Sydserff and Weetman, 1999). This lack of research is brought into sharp focus in light of an emerging body of literature suggestive of the view that managements engage in impression management strategies in the wider documentary contexts of the corporate report.

1.4.2 Evidence of impression management in accounting narratives

An emerging body of research, referred to as the impression management literature, investigates the processes by which individuals, typically company management responsible for the preparation of corporate reports and the like, attempt to control the impressions others form of them (Leary and Kowalski, 1990, p. 34). The traditional and early focus of research in accounting, which can be subsumed under a focus upon impression management, was on accounting numbers management (see e.g., Schipper, 1989; Tweedie and Whittington, 1990), a focus which has developed to encompass the wider documentary context of the annual report (Hopwood, 1996; Gallhofer *et al.,* 2000) and, in particular, the use of graphical, visual and narrative media to disclose financial information. Broadly, three strands can be identified in the impression management literature, which reflect the particular medium that is the focus of attention. First, studies investigating graphical disclosures; second, studies with a more general coverage of visual disclosures; and third, studies whose focus is impression management in accounting narratives.

A detailed review of the impression management literature in relation to accounting narratives is included as chapter 3 of this study. This review is set in the context of the other strands of the impression management literature (section 3.2). A number of important issues emerge from that review. First, a good deal of evidence points to managements engaging in impression management strategies in their discretionary narrative disclosures. Second, there are relatively few investigative studies in a UK context. Third, there are relatively few studies whose focus is the 'OFR type' narrative

(referred to in section 1.4.1 above). Fourth, when compared to the other strands of the impression management literature, in particular, the investigation of graphical disclosures, there is a mismatch between what is an ever-increasing prominence given to the wider documentary context of the corporate report (section 1.4.1) and the extent of empirical investigation into the narrative context, in particular. One of the main reasons for this is the lack of usable methods of analysis available to accounting researchers in this field. The development of such methods is the primary research objective of this study (section 1.2.2.1).

1.4.3 Regulatory environment and policy issues

The justification here for the need for research into accounting narratives concludes with an overview of the regulatory environment. Section 1.4.1 made a number of points in relation to the financial reporting environment and, in particular, the potential for narratives like the OFR to become mandatory like the MD&A, rather than best practice. In this regard, it is likely that the statement *Operating and Financial Review* (ASB, 1993) will be revised. For example, the company law review research project on the OFR, prepared by the Industrial Society (Industrial Society, 2001), as part of the DTI consultation process, recommends both amendments to structure and content and additional guidance on preparation (p. 8). The onus for detailed policy revision would pass to the ASB. There is a clear need for further research into 'OFR-type' narratives as an input to such a revision process. A further interesting question is to consider the appropriateness of guidance on the preparation of narratives like the Chairman's statement. The empirical application reported in this study (chapter 7) investigates the Chairman's statement and 'OFR-type' Manager's report of investment trust companies. Best practice for *both* the Chairman's statement and Manager's report is outlined in the Association of Investment Trust Companies' *Guide to Good Practice for the Report & Accounts of Investment Trust Companies* (AITC, 2000).

Turning to the issue of audit regulation, and in light of the increasing body of evidence indicative of impression management in the wider documentary context of the audit report, it is alarming that there is relatively little evidence of significant efforts to address this in the regulatory context. The new sites of accounting discourse are subject to minimal audit scrutiny. The requisite International Standard on Auditing (ISA) 720 – *Other Information in Documents Containing Audited Financial Statements* (IFAC, 1993) - requires auditors to satisfy themselves that the other information is 'not inconsistent' with the financial statements or 'presented in a misleading manner'.

Difficulties present for the auditor: first, in determining whether a disclosure is inconsistent or misleading; and second, what (if any) action they can take if matters at issue are unresolved. Little guidance is provided. Kohut and Segars (1992) suggest that management is entirely in control of this 'other information'. An examination of the development of standards and guidance in a particular institutional context, provides interesting insights. The UK is a case in point.

In 1994, the UK auditing standard setting body, the Auditing Practices Board (APB), published a strategic framework for the future development of auditing – *The Audit Agenda* (APB, 1994). This framework identified a number of 'key proposals' for change. The first proposal stated that the scope of listed company audits should be extended to include assurance to shareholders on the consistency of all textual information accompanying the financial statements with the view portrayed by the financial statements (Key Proposals).

This represented a radical development, an extension of the auditor's reporting scope beyond the financial statements, in recognition of the increasing importance of narrative reporting. Interestingly, this recommendation closely followed the publication of the accounting statement for narrative reporting – *Operating and Financial Review* (ASB, 1993).

During the consultation period that followed publication of *The Audit Agenda*, the APB issued Statement of Auditing Standards (SAS) 160 - *Other Information in Documents Containing Audited Financial Statements* (APB, 1995), which mirrored in all material respects the parallel international standard (ISA 720). SAS 160 provides clarification on what constitutes 'other information' (para. 3) and requires the auditor to read that information with a view to identifying any misstatements or material inconsistencies with the financial statements (para. 5). Little guidance is provided for the auditor in dealing with misstatements or inconsistencies should they arise, and in particular, with unresolved matters. While recommending that auditors 'should consider the implications for their report' (para. 10), with respect to the auditor's statutory requirement to report on whether the financial statements give a true and fair view, the standard states that 'auditors have *no responsibility* to report that the other information is properly stated' (para. 4, our emphasis). The requirements of the standard clearly fall some way short of *The Audit Agenda's* key proposal.

In 1996, the APB published *The Audit Agenda – Next Steps* (APB, 1996a), the second strategic document in its *Audit Agenda Programme*. In this document, the APB justifies the conservative position adopted in SAS 160 on the basis that responses to the 1994 consultation document did not support the application of full audit rigour (i.e. extending the auditor's reporting scope) for 'other information'. 'In particular, commentators wish to avoid jeopardising the flexibility of reporting available to companies and express concerns about cost and the possible fossilisation of flexible meaningful reporting outside the financial statements' (para. 2.1). Recognising that the amended proposals fell some way short of its initial recommendations, the APB committed to considering the need for additional guidance to strengthen the application of SAS 160 (APB, 1996a, para. 2.1). In addition, the APB identified 'clear communication' and 'association' as two of the nine fundamental principles that comprise *The Auditor's Code* (APB, 1996b, Appendix 1). The principle of 'association' stipulates that "auditors allow their reports to be included in documents containing 'other information' only if they consider that the additional information is not in conflict with the matters covered by their report, and they have no cause to believe it to be misleading" (Appendix 1). Notwithstanding these matters, however, it is clear that the APB had set aside its initial agenda for change (Sydserff, 1998).

In April 1999, honouring its commitment to provide additional guidance, the APB issued an exposure draft of a revision to SAS 160 on the premise that 'the Board has become aware that uncertainty exists in relation to the interpretation of certain aspects of SAS 160' (APB, 1999a, Preface). The uncertainties dealt with relate to the nature of the requirement 'to read' and the remedies at auditors' disposal should they identify a material misstatement or inconsistency. With regard to the latter point, the standard recognises that unresolved matters may involve the auditors including in their report an explanatory paragraph (para. 14). That apart, however, an emphasis on the problems associated with auditing qualitative statements and a lack of clear guidance, might lead to the view that the APB is simply 're-presenting itself' and avoiding tackling the key issues. Such criticisms of the APB and its predecessor, the Auditing Practices Committee (APC), have been voiced both in the academic and professional literature (Sikka, 1997). The revised standard was published in August 1999 (APB, 1999b), in all material respects identical to the format of the exposure draft.

The discussion here of audit regulation raises the question as to whether the emerging dynamic of the financial reporting environment, particularly in the wider documentary

context of the corporate report, is adequately addressed in the regulatory framework. It is likely that, if narratives like the OFR become mandatory rather than best practice, then the debate regarding the scope of audit reporting will re-emerge. Percy (1999) articulates a vision for the future of auditing which will demand different skills from the auditor than the traditional accountancy skills. An important dimension to these skills will be the ability to provide assurance on narrative disclosures, which he envisions as becoming increasingly prominent in the emerging business reporting environment (p.82).

In the meantime, and in the light of the issues discussed in this section, there is a pressing need for further research into accounting narratives, particularly with regard to issues associated with impression management. Research in this area will provide a major impetus to the development of change, particularly with regard to the development of accounting and auditing regulatory guidance.

1.5 Locating the work within research into accounting narratives

Two broad spheres of research into accounting narratives can be identified. These can be termed methodological and empirical. The methodological sphere is concerned with the methods used to evaluate accounting narratives. A particular focus of the literature in this sphere is the critique of existing methods of evaluation. The empirical sphere is concerned with the particular issues investigated by researchers and the range of accounting narratives investigated. The term 'theoretical' can be associated with both spheres of research. For example, the orientation of the literature falling within the compass of methodological sphere, particularly in terms of critique, is the theoretical validity of the methods used. The accumulating of empirical evidence, for example in relation to issues of impression management, contributes to the theory of impression management in relation to accounting narratives.

Tables 1.2 and 1.3 below summarise respectively the methodological sphere and the empirical sphere. The categorisation in Table 1.2 draws on Jones and Shoemaker (1994) and Smith and Taffler (2000) as well as introducing the terms 'text-focused' and 'reader-focused' which are new to the accounting literature (these terms were defined in section 1.2.2.1 above). Form-oriented analysis involves the routine counting of words, for example, positive / negative keywords. Meaning-oriented analysis focuses on the underlying themes in the narratives under investigation. Validity and reliability are identified as the criteria for the critique of existing methods. By extension, they are also

included in Table 1.2 as the criteria for the development of alternative and complimentary methods. Validity and reliability are the methodological assessment criteria used by Jones and Shoemaker (1994).

The categorisation in Table 1.3 is taken from Jones and Shoemaker (1994). Specific references to the relevant sections of their paper are included at the foot of the table.

Table 1.2
Research into accounting narratives: methodological sphere

SYNTACTIC ANALYSIS	THEMATIC ANALYSIS
Text-focused:	**Text-focused:**
Readability measures	Form-oriented analysis Meaning-oriented analysis
Reader-focused:	
Cloze procedure Reading complexity evaluation index	
Criteria for critique and development:	**Criteria for critique and development:**
Validity **Reliability**	**Validity** **Reliability**

Table 1.3
Research into accounting narratives: empirical sphere

SYNTACTIC ANALYSIS	THEMATIC ANALYSIS
Accounting narratives investigated:	**Accounting narratives investigated:**
Annual report narratives: Chairman's statement President's letter Letter to Shareholders MD&A	*Annual report narratives:* Chairman's statement President's letter Letter to Shareholders MD&A
Other narratives: Tax law Accounting textbooks	*Other narratives:* Comment letters Peer review reports Transcripts from hearings Tax law
Basic questions investigated: 1. How difficult are annual reports to read? 2. Are some parts of annual reports more difficult to read than others? 3. Are some types of annual reports more difficult than others? 4. Have annual reports become more difficult to read? 5. Is there an association between readability and other variables?	**Issues investigated:** 1. Managements' attitudes 2. The correlation between narrative disclosures and financial reporting 3. The prediction of key variables in tax court case decisions 4. The determination of the impact of comment letters upon FASB exposure drafts 5. The assessment of compliance with prescribed standards

Notes:
Col. 1 (syntactic analysis) is based on Jones and Shoemaker (1994), pp. 169-71.
Col. 2 (thematic analysis) is based on Jones and Shoemaker (1994), pp. 166-9.

The research in this study is located in both the methodological and empirical spheres. This is reflected in the stated objectives of the study (section 1.2.2 and Table 1.1). The primary research objective concerns the methodological sphere. The secondary research objectives, specifically objectives 2.1 and 2.2 (Table 1.1), fall within the empirical sphere.

Turning first to the methodological sphere, all of the methods developed in this study are text-focused. One of the methods developed is offered specifically as an alternative to readability formulas, which are currently the dominant methods of syntactic analysis used in the literature. Further, while the methods developed in this study encompass both syntactic and thematic analysis, there is an emphasis towards the syntactic dimension. As stated in the primary research objective (Table 1.1), the contribution of this research within the methodological sphere, is in direct response to acknowledged areas of weakness and gaps identified in the literature.

Turning to the empirical sphere, the empirical application in this study focuses on annual report narratives, specifically the Chairman's statement and the Manager's report. The Manager's report is an 'OFR' type narrative found in the annual reports of UK investment trust companies. As stated in the secondary research objectives 2.1 and 2.2 (Table 1.1), the empirical analysis will yield some interesting insights both in relation to the accounting narratives of UK companies and narratives other than the Chairman's statement. Both of these areas have received relatively little attention in the literature. The particular issues and research questions investigated in this study relate to impression management. In terms of the summary of questions and issues in Table 1.3, question five under syntactic analysis and issues two and five under thematic analysis, have a particular relevance in relation to the investigation of impression management. The orientation of the empirical application towards the questions and issues associated with impression management reflects the importance of this area of research.

While the research in this study is located in both the methodological and empirical spheres, it is important to note that the empirical contribution is secondary to what is primarily a methodological contribution. This is reflected in the stated research objectives (Table 1.1 and sections 1.2.2.1 and 1.2.2.2 (see also the sections following in relation to research contributions, in particular sections 1.7.1 and 1.7.2)). The empirical application is therefore included primarily to demonstrate the aptitude of the methods

developed, in terms of research designs and measurement models, for use by accounting researchers investigating impression management. Its contribution as an empirical study in its own right is secondary to that primary purpose. This prioritising is reflected, for example, in the selection of investment trust companies as a focus for investigation. Moreover, were the primary orientation of the study empirical, then a larger sample size would have been appropriate.

1.6 Research questions

The literature reviewed in chapters two and three gives rise to seven research questions. Three are developed from the methodological critique in chapter 2 (reported in section 2.7 and Table 2.2). Four are developed from the review of the empirical impression management literature in chapter 3 (reported in section 3.9 and Table 3.2). A final research question is added in chapter 4.

Table 1.4 below is an overall summary of the research questions. This tabulated summary is reported as Table 4.1 (section 4.2) in the main body of the study. Table 4.1 is a synthesis of questions arising from chapters 2 and 3, together with the additional research question added in chapter 4. The table is included here for completeness, consistent with the intention to provide an overview of the study in this introductory chapter.

Table 1.4
Research questions

Primary research questions [correspond to primary research objective]	
1.1	Are there text-focused methods of evaluation that can redress the lack of emphasis on the syntactic dimension, exhibited in the existing portfolio of approaches?
1.2	Is there a defensible, reliable, representative measure of readability which takes account of variability, that can be offered as an alternative to readability formulas?
1.3	Are there text-focused methods in the managerial business communications literature, which can be identified as offering potential for the accounting researcher investigating impression management?
1.4	Do the text-focused methods developed in this study satisfy the recognised assessment criteria for methodological development?
1.5	Do the text-focused methods developed in this study give rise to dependent variables, which can be used as inputs to tests of association and tests of differentiation?
1.6	Are the methods developed in this study capable of being used in empirical applications investigating impression management?
Secondary research questions [corresponds to secondary research objectives]	
2.1	Are the corporate annual report narratives (Chairman's statement and Manager's report) of 'good performing' and 'poor performing' UK investment trust companies systematically different?
2.2	Are the Chairman's statement and Manager's report of UK investment trust companies systematically different?

The research questions are developed in order to pursue the objectives of the study. The eight research questions flow directly from the specific research objectives stated in Table 1.1. Research questions 1.1 to 1.6 relate to the primary research objective. Research question 2.1 and 2.2 correspond to the secondary research objectives 2.1 and 2.2, respectively.

1.6.1 Primary research questions

Questions 1.1, 1.2 and 1.4 emerge from the methodological critique in chapter 2. Questions 1.1 and 1.2 relate to areas of weakness or gaps identified in the literature. Question 1.1 reflects a general line of criticism, while question 1.2 reflects a specific call in the literature. Question 1.4 relates to the recognised framework of assessment criteria that will serve as a referent in developing new methods.

The primary research questions 1.5 and 1.6 are developed from the review of impression management literature in chapter 3. Question 1.5 arises from the specific requirements of accounting researchers investigating impression management, identified through the literature review. Question 1.6 is based on the premise that, if the methods developed are to be used by accounting researchers in future empirical research, their aptitude must be demonstrated through an illustrative empirical application.

Finally, in relation to the primary research objective, question 1.3, identified in chapter 4, reflects what is a specific contribution of this study, namely to identify and develop for use in accounting applications, text-focused methods in the managerial business communications literature (see here the discussion in section 1.3 above). Although this question is identified in chapter 4, it is included in the overall tabulated summary (reproduced here as Table 1.4) as question 1.3. This reflects a logical ordering in relation to the sequence in which the research questions are addressed throughout the remainder of the study.

1.6.2 Secondary research questions

The secondary research questions emerge from the review of the empirical impression management literature in chapter 3. Question 2.1 reflects what is arguably the dominant question investigated by accounting researchers investigating impression management. In the empirical application reported in chapter 7, this question will be addressed across the range of textual dimensions embraced by the methods developed in this study. Question 2.1 also embraces the 'OFR type' Manager's report and focuses on a UK context. Hitherto, narratives of this type and the UK context have received relatively little attention from accounting researchers. Building on this point, question 2.2 investigates differential reporting patterns between the Chairman's statement and the Manager's report.

1.7 Contribution of the research

In pursuit of the general research objective to advance research into accounting narratives, this study contributes three methods of evaluation to the existing portfolio of approaches. The methods developed have a particular orientation towards the investigation of impression management. In addition, the study contributes to the emerging body of empirical evidence investigating impression management in accounting narratives. Sections 1.7.1 and 1.7.2 review the contribution of this study in pursuit of the specific research objectives detailed in Table 1.1. Section 1.7.1 considers the contribution in pursuit of the primary research objective. Section 1.7.2 focuses on the contribution in pursuit of the secondary research objectives. These sections and the tabulated summaries included within the sections (Tables 1.5, 1.6 and 1.7), summarise material included in the concluding chapter 8 (see in particular, section 8.1 and 8.2 and relevant sub-sections (Table 1.5 is also included in chapter 4 (section 4.6))). As with the tabulated summary of research questions (Table 1.4) and the related discussion in sections 1.6.1 and 1.6.2, the material on research contribution is included here for completeness, consistent with the intention of providing an overview of the study in this introductory chapter.

1.7.1 Contribution in pursuit of primary research objective

Three text-focused methods are developed in pursuit of the primary research objective: the texture index or indexical approach, a transitivity index and *DICTION* analysis. All of these methods have a sound theoretical basis in linguistics. In referring to a theoretical basis in linguistics, two dimensions are embraced. First, the methods are drawn from the applied dimension of linguistics, where the theoretical insights of linguists are developed into usable methods for analysis. All three methods fall within the scope of a particular dimension of applied linguistics, namely a systemic approach. The systemic approach to language study is concerned with how linguistic structures are exploited in strategic narrative construction. Secondly, to refer to a theoretical basis in linguistics is to go beyond the applied orientation to a theoretical or formalist literature, where the linguistic principles underlying the applied approaches are developed. For each of the methods developed in this study, their basis in linguistics is discussed both in the context of applied linguistics (a systemic approach) and theoretical linguistics (see Table 1.5 below).

The texture index and transitivity index go some way towards redressing the general lack of emphasis on the syntactic dimension, exhibited in the existing portfolio of

approaches. The texture index analyses text across a number of dimensions or indexicals and embodies a number of features which render it attractive to accounting researchers. It is developed in this study expressly as an alternative to readability formulas, in response to a particular call in the literature. The transitivity index measures the percentage of passive constructions in a text. The use of passive constructions gives a text a veneer of objectivity, neutrality, scientific 'truth' or fact, used typically in circumstances where writers find it advantageous to distance themselves from the message. Both the texture index and the transitivity index employ a manual based coding approach and analysis.

In addition to the texture and transitivity indices, the study advocates the use of *DICTION* analysis. This approach is selected principally because of its relevance and applicability to the investigation of impression management. *DICTION* is a computerised content analysis program, which examines a text for its verbal tone across five variables: 'certainty', 'optimism', 'activity', 'realism' and 'commonality'.

All of the approaches developed satisfy the recognised methodological assessment criteria specified in the accounting literature and are developed expressly with regard to the particular requirements of accounting researchers investigating impression management. Moreover, the aptitude of the methods for use by accounting researchers investigating impression management, is demonstrated through an illustrative empirical application.

Taking the approaches together, two lines of development are evident. The texture index is developed from the applied linguistics literature. It has not previously been used in an accounting-related application. The transitivity index and *DICTION* analysis are developed from the managerial business communications literature, where they have been used, albeit to a limited extent and from an applied linguistics / managerial perspective, in accounting-related applications. Table 1.5 summarises these lines of development.

Table 1.5
Summary of lines of development

Accounting literature [this study]	Managerial business communications literature	Applied linguistics: A systemic approach	Theoretical basis in linguistics
Line 1:			
Texture index		Texture index	Standards of textual communication
Line 2:			
Transitivity index	Measure of transitivity	Measure of transitivity	Transitivity
DICTION analysis	*DICTION* analysis ['certainty' variable]	*DICTION* analysis [five variables]	Linguistic semantics

Table 1.5 embodies what is a general contribution of this study in pursuit of the primary research objective, namely the fostering of an ethos of interdisciplinarity between research communities in accounting and the communities of applied linguistics and managerial business communications. In pursuing such an interdisciplinary approach, the accounting researcher can embrace insights and usable methods of analysis developed in disciplines whose specialism is the evaluation of narrative.

Table 1.6 details the research contribution in relation to the primary research objectives.

Table 1.6
Contribution in pursuit of primary research objective

Specific research contributions [in relation to specific research objectives]:

Primary research objective:

1. In response to areas of weakness and gaps identified in the literature, to develop text-focused methods of evaluating accounting narratives, which can be used by accounting researchers investigating impression management.

Research contributions:

Three text-focused methods are developed, which contribute to a richer empirical analysis of accounting narratives:

Texture index

- The texture index or indexical approach is developed as an alternative to readability formulas, in response to a particular call in the literature.
- The approach analyses text across a number of dimensions and embodies a number of features, which render it attractive to accounting researchers.
- Detailed decision rules for application and a pro-forma scoring sheet are developed and illustrated for a sample narrative.

Transitivity index

- The transitivity index is a measure of the number of passive constructions in a text.
- Links are established with studies investigating patterns of causal reasoning and attribution in accounting narratives.
- Detailed rules for application are developed and illustrated for a sample narrative.

***DICTION* analysis**

- *DICTION* is a commercially available computerised form-oriented thematic content analysis software programme that analyses a text for verbal tone. Verbal tone is measured in terms of five master variables: 'certainty', 'optimism', 'activity', 'realism' and 'commonality'.
- The approach generates index scores for the five master variables and the component variables, which are the basis of the master variable scores. In all, *DICTION* reports scores for 39 variables.

Specific research contributions [in relation to specific research objectives]:

- This study builds on a limited 'accounting' application in the managerial business communications literature, where only the 'certainty' variable is investigated, to exploit *DICTION* to its full potential.

General comments relating to all three methods:

- All three methods have a sound theoretical basis in linguistics (both in applied linguistics and theoretical linguistics).
- The methods satisfy the recognised methodological assessment criteria identified in the accounting literature.
- The aptitude of the methods for use by accounting researchers investigating impression management is demonstrated through an illustrative empirical application. In particular, all of the approaches generate dependent variables, which can be used in tests of differentiation.
- The texture index and transitivity index go some way towards redressing the lack of emphasis on the syntactic dimension, exhibited in the existing portfolio of approaches. The texture index embraces both syntactic analysis and meaning-oriented thematic analysis. The transitivity index focuses solely on syntactic analysis.
- An overview of the methods developed in this study, together with existing methods in the accounting and managerial literatures, point towards an holistic approach to text analysis.

General contribution relating to the primary research objective:

- Fosters an ethos of interdisciplinarity between research communities in accounting and applied linguistics.
- Fosters an ethos of interdisciplinarity between research communities in accounting and managerial business communications.

1.7.2 Contribution in pursuit of secondary research objectives

Table 1.7 summarises the research contribution in relation to the three secondary research objectives. In particular, the study finds mixed results in relation to the investigation of differential reporting patterns in the narratives of 'good performers' and 'poor performers' (research objective 2.1) and between the Chairman's statement and the Manager's report (research objective 2.2). In discussing these results, it is argued that the presence *or* absence of differentiation can be indicative of impression management, depending on the particular textual dimension that is being investigated (see in particular here, sections 3.7 and 7.9). In relation to the investigation of the

Manager's report, the study offers some interesting insights in relation to an 'OFR type' narrative. Moreover, the study offers insights in terms of a UK context for a particular industry sector.

Finally, in relation to objective 2.3, the literature review included as chapter 3 provides an overall synthesis of the empirical literature investigating impression management in accounting narratives in corporate reports.

Table 1.7

Contribution in pursuit of secondary research objectives

Specific research contributions [in relation to specific research objectives]:
Secondary research objectives:
2.1 To investigate whether the narratives of 'good performers' and 'poor performers' exhibit differential reporting patterns **Research contributions:** Empirical study contributes to impression management literature: • Mixed results in relation to investigation of differential reporting patterns in the narratives of 'good performers' and 'poor performers' • Extends focus beyond Chairman's statement to encompass 'OFR type' Manager's report • Offers particular insights in relation to narrative reporting practices in a UK context for a particular industry sector – investment trusts
2.2 To investigate whether different accounting narratives exhibit differential reporting patterns **Research contributions:** Empirical study contributes to impression management literature: • Mixed results in relation to investigation of differential reporting patterns in Chairman's statement and Manager's report • Extends focus beyond Chairman's statement to encompass 'OFR type' Manager's report • Offers particular insights in relation to narrative reporting practices in a UK context for a particular industry sector – investment trusts

Specific research contributions [in relation to specific research objectives]:	
2.3	To synthesise the empirical literature in relation to the investigation of impression management in accounting narratives in corporate reports **Research contribution:** Literature review included as chapter 3

1.8 Organisation of the study

Chapters 2 and 3 are a review of the literature. Taken together, the purpose of these chapters is to provide a context from which the methods described and illustrated in subsequent chapters will be developed.

Chapter 2 focuses on methodological issues, taking as its starting point Jones and Shoemaker's (1994) review and critique of the use of content analysis, both syntactic and thematic, as a method in the accounting domain. A consistent line of criticism points to weaknesses in relation to the syntactic dimension. The critique is both general and specific. In general, there is a lack of available methods to investigate the syntactic dimension. In particular, the critique of readability formulas, the dominant method of syntactic analysis in the accounting literature, points to fundamental weaknesses in validity, raising the question of the relevance and continued use of readability formulas in the accounting domain. The framework of methodological assessment criteria that is used to pursue the critique in this chapter is identified as an appropriate framework of reference for the development of new methods. The chapter concludes by identifying a number of research questions arising from the methodological critique.

Chapter 3 is a detailed review of empirical studies investigating impression management in corporate reports. Building on the methodological critique in chapter 2, the research designs and measurement models typical of studies investigating impression management are identified, which will serve as a focus for developing the methods in this study. The aptitude of the methods for investigating impression management will be illustrated through an empirical application (see chapter 7). The specific orientation towards impression management reflects the importance of the impression management literature. To date, as far as the author is aware, no comprehensive review of this nature has been published in the literature. The chapter

offers such a review. Moreover, the literature review yields some interesting insights in relation to the development of the empirical application and provides an appropriate context for discussing the results. Finally, a number of additional research questions emerge from the review of the impression management literature to augment those developed in the context of the methodological critique in chapter 2.

Chapter 4 functions as a bridge between the literature reviews in chapters 2 and 3 and chapters 5 and 6, where the three text-focused methods contributed by this study are developed and described in detail. The research questions emerging from the literature reviews are synthesised along with an additional research question relating to the potential for developing methods from the managerial business communications literature. A number of methods are identified in the managerial business communications literature as offering potential to the accounting researcher investigating impression management. Based on the issues emerging from the literature reviews in chapters 2 and 3, and in light of developments in the managerial business communications literature, three text-focused methods are identified for development: the texture index, the transitivity index and *DICTION* analysis. The chapter concludes with an overview of the research design, research questions and data used in the illustrative empirical application in chapter 7. There are two reasons for the inclusion of this material at this point in the study. The first relates to the expressed orientation of developing the methods with a view to investigating impression management. The research design and research questions provide such a referent in the detailed development chapters which follow. Second, the methods are developed and illustrated using this data.

Chapters 5 and 6 are the detailed development chapters. Chapter 5 focuses on the texture index, which is developed from the applied linguistics literature. It is offered as an alternative to the dominant syntactic method in the accounting literature, text-focused readability formulas.

The focus of chapter 6 is the transitivity index and *DICTION* analysis. These methods are developed from the managerial business communications literature.

Chapter 7 is an illustrative empirical application using the methods developed in this study along with Flesch readability scores. The primary purpose of including this empirical application, reflected in the stated research objectives (section 1.2.2 and Table

1.1) is to demonstrate the aptitude of the methods developed in this study for investigating impression management in accounting narratives. As a secondary contribution, the empirical application yields some interesting insights in relation to the differential reporting patterns of 'good performers' and 'poor performers' and between the Chairman's statement and the 'OFR type' Manager's report.

Chapter 8 summarises and concludes on the study, identifying a number of possibilities for further research.

CHAPTER 2

REVIEW OF LITERATURE: OVERVIEW AND CRITIQUE OF EXISTING METHODS

2.1 Introduction and overview of chapter

As indicated in section 1.1, Jones and Shoemaker's (1994) (hereafter J&S) review and critique of the use of content analysis, both syntactic and thematic, as a method in the accounting domain, will be taken as the starting point for the methods developed in this study. This watershed study identifies a number of gaps and weaknesses in the literature, which might potentially be exploited. This chapter summarises their critique and then develops their critique in light of the subsequent insights and reflections in the literature. Taken as a whole, this extended critique provides a context from which the methods described and illustrated in subsequent chapters will be developed.

The structure of the chapter is as follows. Section 2.2 offers a framework for the categorisation of methods in the accounting literature as text-focused and reader-focused. The strengths and weaknesses of these different approaches are discussed. In light of that discussion, it is argued that text-focused methods offer a more appropriate model for the accounting researcher investigating impression management. That said, it is acknowledged that the incorporation of reader or user insights in the development phase of the text-focused method, enhances the acceptability and relevance of the method. Section 2.3 provides a summary categorisation of extant text-focused methods in the accounting literature. The sub-categorisation in sections 2.3.1 and 2.3.2, distinguishes between the particular textual characteristics that the methods seek to evaluate, namely syntactic analysis and thematic analysis. Section 2.4 offers a framework of recognised assessment criteria for critiquing existing methods and, by extension, for developing new methods. This framework is taken from J&S. Section 2.5 offers a critique of existing methods in the accounting domain, focusing both on the critique of methods of syntactic analysis (section 2.5.1) and methods of thematic analysis (section 2.5.2). J&S's critique is extended to encompass insights and reflections in the literature published after their study. Section 2.6 summarises the areas of weakness and gaps identified in the literature. Section 2.7 identifies a number of research questions developed in the context of this critique. Section 2.8 summarises and indicates how the review of literature in this chapter links with the review of empirical studies investigating impression management in chapter 3.3.

2.2 Categorising methods in the accounting literature: text-focused and reader-focused

Methods used by accounting researchers for evaluating accounting narratives can be categorised as text-focused and reader-focused (Schriver, 1989). Text-focused methods are concerned with examining features of the narrative and drawing inferences therefrom (p. 241). While reader or user insights can be incorporated in the development phase of the text-focused method, there is no direct reader or user involvement in the evaluative process. By contrast, reader-focused methods involve direct reader involvement in the evaluative process (p. 247).

Text-focused methods are dominant in the accounting literature. Of the reader-focused methods used in the accounting domain, the cloze-procedure has enjoyed a degree of prominence. This procedure investigates lexical predictability for a particular user group. In a review article on the use of the cloze procedure in the accounting domain, Jones (1997) identifies nine empirical studies (p. 109). Patel and Day (1996), published concurrently with Jones' review article, can be added to that group. The cloze procedure is regarded by some as a solution to linking readability and understandability or comprehension (see section 2.5.1 for further discussion on this). Stevens *et al.* (1992), for example, comparing readability formulas with the cloze procedure, argue that the latter is preferable, because it allows one to assess the readability of material by its intended audience (p. 378). Jones (1997), however, questions the validity and reliability of the cloze procedure in the context of its use in the accounting domain. Other reader-focused methods used include Martindale *et al.*'s (1992) reading complexity evaluation index, which they used to investigate tax law complexity. This procedure, which is offered as an alternative to text-focused readability formulas, uses a number of questions and coded responses on a seven-point Likert scale, to elicit directly from readers their perceptions of both content and text complexity.

The orientation of this thesis is towards text-focused methods of evaluation. There are three principal reasons for this. First, text-focused methods are more readily suited to the requirements of accounting researchers, particularly where large text samples are required for empirical studies. Second, there are a number of problems associated with identifying representative groups for reader-focused testing. Third, and perhaps most importantly, the trend in the applied linguistics literature and the managerial business communications literature, from which the methods developed in this study are drawn, is towards text-focused methods of evaluation. Finally, as noted in section 2.1 above,

although the orientation here is towards text-focused methods, the methods developed in this study embrace a reader or user perspective in the development phase.

2.3 Categorising text-focused methods in the accounting literature

J&S's critique of the use of content analysis methodology in the accounting domain identified two major complementary approaches: syntactic analysis and thematic analysis. A similar categorisation will be used here, reflected in sections 2.3.1 and 2.3.2 (see also here, definition of terms in section 1.3).

2.3.1 Methods of syntactic analysis

Readability formulas dominate syntactic analysis in the accounting literature. In the Appendix to their review (pp. 176-7), J&S provide a brief description of the formula-based readability formulas used in the accounting literature. In their tabular analysis of empirically based readability studies, they indicate for each study which particular readability measures are used (Table 2, pp. 153-9). It is clear from their analysis that the Flesch index has become established in the accounting literature as the dominant method. Of the 32 studies reviewed, 26 use the Flesch index (or the Flesch-Kincaid variant). This trend is reflected in the studies published subsequent to their critique. Courtis (1998), for example, acknowledges the dominance of Flesch, which he attributes to its computational ease, general understandability, and comparability with other similar studies (p. 459). The texture index (chapter 5), which is offered as an alternative to text-focused readability formulas *per se,* uses Flesch readability scores as a comparative (see in particular, section 5.5).

In addition to the standard readability formula, two other methods of syntactic analysis are worthy of note. Kohut and Segars (1992) used a mixture of manual and computerised coding in their investigation of readability. The manual coding was at a relatively simplistic level, for example, word counts, number of sentences, but the study nevertheless raises the spectre of manual coding being employed in syntactic analysis. Adelberg (1983) devised an accounting syntactic complexity formula as a new instrument for predicting the readability of selected accounting communications. The complexity formula is an attempt to move beyond the traditional focus of readability formulas on word and sentence level features to embrace more complex grammatical structures. The method, however, was only outlined in this paper in preliminary form, intended for directional use for those engaged in accounting writing, or for those engaged in critiquing accounting writing (p. 173). This intended use in part reflects the

requirements of accounting researchers at the time, where there was less demand, for example, for dependent variables for use in tests of association or tests of differentiation (see here section 3.8). That said, it is not considered worthwhile at this stage to resurrect Adelberg's method and explore its possibilities for the investigation of impression management. The principal reason for this is the availability, in the applied linguistics literature and in the managerial business communications literature, of methods of syntactic analysis that reflect more than a decade of scholarship since the publication of Adelberg's paper. It is clear from the discussion in this section that the portfolio of approaches available to the accounting researcher engaging in syntactic analysis is limited.

2.3.2 Methods of thematic analysis

Smith and Taffler (2000) offer a helpful categorisation of methods of thematic analysis. They identify two generic approaches: 'form-oriented' analysis, which involves routine counting of words and 'meaning-oriented' analysis, which focuses on the underlying themes in the texts under investigation (p. 627). A typical focus of form-oriented analysis would be keyword variables. For example, a number of studies focus on 'positive' / 'negative' keywords (e.g. Hildebrandt and Snyder, 1981; Abrahamson and Park, 1994; Abrahamson and Amir, 1996 (reviewed in section 3.6.1.1)). Typically, form-oriented analysis will rely on some form of objective, computerised analysis of texts based on a compendium or taxonomy of keywords. There is, however, a degree of subjectivity involved in constructing such a taxonomy and in identifying words as, for example, positive and negative. A whole range of approaches to meaning-oriented analysis have been used by accounting researchers. These range from manual coding based on the researcher's subjective judgement to forms of automated thematic analysis based on predetermined themes. In this regard, J&S refer to a wide range of sophistication of approaches (p. 168). A number of studies embrace both approaches to thematic analysis. Smith and Taffler (2000), for example, integrate keyword analysis and thematic analysis in investigating whether a firm's discretionary narrative disclosures measure its financial risk of bankruptcy.

2.4 A framework of assessment criteria

J&S's critique of the use of content analysis as a research method in the accounting domain, is based on a framework of assessment criteria. This framework not only provides a context for critique, but also a reference for the development of new methods. The methods developed and described in this thesis will be assessed in terms

of their satisfaction of these criteria. The framework offered by J&S is based on Weber's (1990) assessment criteria of validity and reliability. The essence of the collected criteria, or the framework as a whole, is to assess the extent to which the results of an empirical study mirror reality.

2.4.1 Validity

Validity can be categorised in terms of face validity and external validity. A category has face validity if it measures the construct it purports to measure. Face validity is the fundamental validating criterion. J&S refer to face validity as "the most basic and overarching form of validity" (p. 162).

External validity, concerned broadly with the generalisability of results, is based on five separate components: construct validity, hypothesis validity, predictive validity, population validity and ecological validity. Construct validity is concerned with the accuracy with which a particular construct is measured. For example, where two methods measure thematic content, construct validity is evidenced (for both methods) when the results are replicated. A lack of replication is indicative of poor construct validity, for one or both methods. Hypothesis validity, which is similar to face validity, is concerned with the relationship between hypothesised constructs and theory. J&S (1994, p. 164) illustrate with an example from the attribution literature. Staw *et al.*'s (1983) findings from their investigation of causal attribution are consistent with attribution theory, thereby enhancing the hypothesis validity of the analysis (see section 3.5 for a review of the attribution literature). Predictive validity is concerned with whether the findings in a particular study correspond to actual events. For example, a seam of studies in the accounting literature focuses on the particular task domain that is the 'failed' / 'non-failed' decision environment (e.g. Tennyson *et al.,* 1990; Smith and Taffler, 1995; 2000 (these studies are reviewed in section 3.6.2). Underlying these studies is the attempt to develop a content analysis methodology that can predict subsequent failure or bankruptcy. Predictive validity is exhibited to the extent that firms can be correctly classified as 'failed' / 'non-failed'. Population validity concerns the generalisability of results to other populations. J&S (pp. 164-5) illustrate with reference to tests of readability. Readability formulas were developed for diagnostic purposes to assess the reading level of children in an educational context. Their application without adaptation to technical accounting texts, with an entirely different audience context is questionable. Finally, ecological validity refers to the ability to

generalise results over times and settings. Temporal factors and geographical factors may impede ecological validity.

2.4.2 Reliability

Alongside validity, the reliability of a particular method is also important. Reliability is concerned with the ability to replicate results. J&S (p. 165) refer to a definition by Krippendorf, which succinctly captures the essence of the assessment criteria. "A reliable procedure should yield the same results from the same set of phenomena regardless of the circumstances of application" (Krippendorf, 1980, p. 129). Reliability can be considered in terms of stability and reproducibility. Stability is concerned with the degree of variance in coding over time; reproducibility, with the degree of correlation, for example, between multiple coders using the same text.

Table 2.1 summarises this framework of assessment criteria.

Table 2.1
A framework of assessment criteria

Validity	**Reliability**
Face validity [fundamental validating criterion]	Stability
External validity:	Reproducibility
Construct validity *Hypothesis validity* *Predictive validity* *Population validity* *Ecological validity*	

[Framework based on Jones and Shoemaker, 1994, pp. 162-166]

A recurring factor in the above framework is the objectivity of the particular method under scrutiny and the associated issue of computerised vs. manual analysis. J&S discuss objectivity both in terms of validity (in particular, face validity) and reliability. The strength of face validity is dependent on the objectivity of the coding method. If the coding is computerised, then there is a high degree of objectivity and face validity is enhanced. This, however, must be balanced over against the potential for a more comprehensive and sophisticated level of analysis that may be possible through manual

coding. In other words, a manual analysis may enhance face validity over against a computerised method, since it permits a more comprehensive measurement of the construct it purports to measure. That said, it is imperative that, where manual analysis is employed, rules are developed to control for replication of the analysis. Here the assessment criterion 'reliability' is relevant. These issues will be discussed in some detail for each of the methods developed in this thesis. In particular, the question of balance - attaining an acceptable degree of validity and reliability, whilst taking all factors into account - will be a recurring theme throughout the detailed development chapters 5 and 6.

2.5 A critique of existing methods in the accounting literature

As indicated above (section 2.3), J&S's critique of the use of content analysis methodology in the accounting domain identified two major complementary approaches: syntactic analysis and thematic analysis. Their review of syntactic analysis focused on readability formulas as the dominant method. By contrast, their review of thematic analysis studies identified a wide range of sophistication of methods (section 2.3.2). This is indicative of what might be considered a bias in the literature, not in terms of the number of studies that can be categorised as embodying a syntactic or a thematic focus, but rather in terms of the limited degree to which the scope or the range of the syntactic dimension has been embraced and investigated. Sections 2.5.1 and 2.5.2 deal respectively with syntactic analysis and thematic analysis.

2.5.1 Critique of methods of syntactic analysis

Text-focused methods of syntactic analysis employed in the accounting domain are predominantly formula-based readability measures. Where a category has face validity if it measures the construct it is intended to measure, J&S argue that readability formulas do not measure a number of factors associated with readability and that readability formulas do not measure understandability or comprehension (pp. 162-3). The link between readability and understandability referred to here is a logic argument accepted by the majority of readability researchers (p. 172). A critical position argues that readability formulas do not measure a number of factors associated with readability and that readability formulas do not measure understandability or comprehension (J&S; Smith & Taffler, 1992a). The traditional focus of readability formulas on number of syllables and mean sentence length ignores the textual features that affect comprehension (Dreyer, 1984, p. 335). In particular, readability formulas disregard what linguists refer to as whole-text aspects (Schriver, 1989). Whole-text aspects are

concerned with the positioning and organisation of sentences and paragraphs in texts and with how information flows through the text.

Turning to questions of external validity, the satisfaction of population validity, in particular, is problematic. The lack of direct reader involvement in the evaluative process means that readability formulas have no regard for the interests and motivation of the reader. Readability formulas originated in the assessment of children's writing. Their applicability to technical texts such as annual reports is questionable (Jones, 1997, p. 121). Accounting writing can be regarded as technical writing (Giles, 1990), characterised by the uniqueness of its technical terminology. Stevens *et al.* (1992, p. 370) point out that readability scores are particularly inadequate measures of the comprehension ability of those adult readers who possess a specialized vocabulary and knowledge base not held by the 'average' reader. It is likely that some readers of annual reports will be well able to read material judged to be difficult or very difficult by readability formulas (Means, 1981). By focusing on number of syllables or sentence length, readability formulas are limited with regard to the realm of experience of annual report readers and to the needs of writers preparing these documents (Giles, 1990, p. 137). In addition to these questions regarding population validity, J&S also point to a number of problems with regard to the satisfaction of the other assessment criteria for external validity (see pp. 164-5).

While validity is problematic, there are compelling reasons for the prevalence of readability formulas. They are inexpensive to use, objective and reliable, and can be helpful in detecting certain obvious classes of error such as excessive sentence length (Schriver, 1989, p. 244). It is of note, however, that J&S question some aspects of their reliability (pp. 164-5).

Since the publication of their critique, some research has continued to use readability formulas (e.g., Courtis, 1995; 1998; James and Wallschutzky, 1997, Smith and Richardson, 1999; Clatworthy and Jones, 2001). The studies by James and Wallschutzky and Smith and Richardson use readability formulas to evaluate the success of the tax law simplification programmes in Australia and the UK (James and Wallschutzky) and Australia (Smith and Richardson). Taken together, these studies conclude that, on the basis of readability scores, the rewrite programmes have been largely unsuccessful. Interestingly, only tangential reference is made to the methodological issues associated with readability formulas. Of the two studies by

Courtis, the earlier study (Courtis, 1995) drew only limited attention to methodological issues. Jones' (1996b) short commentary on this paper offered a number of comments by way of contextualisation, including some reference to methodological issues. In the later study, Courtis (1998) acknowledges the limitations of readability formulas but argues for their continued use in the absence of alternatives. The later study also adds a further dimension of measurement - readability variability. Clatworthy and Jones (2001) develop Courtis' (1998) investigation of readability variability by considering variability in the context of underlying thematic structure (see section 3.4.1 for a fuller discussion of these studies).

To summarise, J&S's critique of readability formulas points to fundamental weaknesses in validity, raising the question of the relevance and continued use of readability formulas in the accounting domain. The challenge to readability researchers is the urgent need for methodological research to advance the readability literature. Courtis (1998, p. 469) articulates this in terms of the specific challenge to identify a defensible, reliable, representative measure of readability that takes account of variability.

2.5.2 Critique of methods of thematic analysis

Turning to methods of thematic analysis, the tenor of J&S's critique is different. While a number of issues are highlighted in relation to both validity and reliability, there is no sense of calling into question the relevance and continued use of thematic analysis *per se* in the accounting domain. In discussing face validity, as the fundamental validating criterion, J&S note that the strength of face validity is dependent on the objectivity of the coding method and correct measurement specification (p. 162). Here the researcher is faced with the question of balance alluded to in section 2.4.2, namely attaining what may be a more sophisticated level of analysis through manual coding over against the enhanced objectivity of computerised coding. In this regard, J&S note that face validity is stronger in manual analysis when human inferences require only nominal coding (i.e., 0 or 1) (p. 162). In relation to external validity, they point to some evidence of poor construct validity in thematic studies (p. 163).

Smith and Taffler (2000) offer a number of insights in relation to this question of balance. Based on a combination of keywords and phrases derived from a form-oriented content analysis, they were able to correctly classify firms in terms of their financial performance. Their approach embraces the benefits of simplicity, automation and a reduction of judgemental input associated with a form-oriented approach, while at

the same time incorporating a refined and sophisticated level of analysis. Interestingly, Smith and Taffler found that "the results from adopting a supposedly less subjective word based content analysis approach are very similar to a theme based methodology" (p. 638). Both approaches were able to correctly classify firms in terms of their financial performance.

Turning to reliability, the criterion of reproducibility is of particular relevance, where reproducibility, and therefore reliability, is dependent on the degree of correlation between two or more coders using the same text (p. 165). The issue of inter-coder reliability is explored in some detail by Milne and Adler (1999). This experimental study involved three coders over five rounds of testing a total of 49 reports, using a sentence-based coding instrument and decision rules developed by Hackston and Milne (1996). They use this particular method as representative of what has emerged as the dominant approach. In particular, they note that most social and environmental content analyses use sentences as the basis for coding decisions (Milne and Adler, 1999, p. 243). The three coders used in the experiment were selected on the basis of their variable experience. The first coder had both previous coding experience and was familiar with social and environmental disclosure research. The second coder was familiar with social and environmental disclosure research, but had no previous coding experience. The third coder had no previous experience of either social and environmental disclosure research or of coding. Overall, the study observed a high degree of inter-coder reliability. Of particular note is their findings which suggest that the coded output from inexperienced coders using the Hackston and Milne approach with little or no prior training can be relied on for aggregate total disclosure analysis (p. 237). Finally, in relation to methodological issues, Unerman (2000) explores issues of quantification in corporate social reporting content analysis. In relation to the debate on measurement techniques, he argues that, while measurement in sentences may be carried out with greater accuracy than measurement in proportions of a page, the former is likely to give less relevant results than the latter (p. 667).

In terms of empirical studies, since the publication of J&S's critique, there has been a proliferation of research using methods of thematic analysis. This is in marked contrast to the continued use of readability formulas. This trend is reflected in the literature review in chapter 3.

2.6 Summary of areas of weakness and gaps identified in the literature

A consistent line of criticism points to weaknesses in relation to the syntactic dimension. This critique is both general and specific. The general line of critique points to the lack of availability of appropriate methods for investigating the syntactic dimension. This is in marked contrast to the more extensive portfolio available to the researcher engaged in thematic analysis. The particular focus of critique relates to readability formulas as the dominant method of syntactic analysis in the accounting literature. The critique points to fundamental weaknesses in validity, raising the question of the relevance and continued use of readability formulas in the accounting domain.

2.7 Developing research questions in the context of this critique

Table 2.2 details three research questions arising from the methodological critique presented in this chapter.

Table 2.2
Research questions arising from methodological critique

Primary research questions [correspond to primary research objective]	
1.	Are there text-focused methods of evaluation that can redress the lack of emphasis on the syntactic dimension, exhibited in the existing portfolio of approaches?
2.	Is there a defensible, reliable, representative measure of readability which takes account of variability that can be offered as an alternative to readability formulas?
3.	Do the text-focused methods developed in this study satisfy the recognised assessment criteria for methodological development?

These research questions are developed in order to pursue the primary specific research objective of the study (see Table 1.1 and section 1.2.2.1). Question 1 arises from the general line of criticism referred to in section 2.6. Question 2 reflects the specific call in the literature for an alternative to readability formulas. Question 3 relates to the framework of assessment criteria used by J&S to pursue their critique (section 2.4 and Table 2.3). As discussed in section 2.4, this framework will serve as a referent for developing methods in this study. Specifically, each of the methods developed in the

study will be reviewed in terms of its satisfaction of the assessment criteria embraced by this framework (see section 5.9 (texture index), 6.2.4 (transitivity index) and 6.3.8 (*DICTION* analysis)).

2.8 Summary and conclusions

The extended critique presented in this chapter provides a context from which the methods described and illustrated in subsequent chapters will be developed. J&S's watershed methodological study, published in 1994, was taken as the starting point. The critique presented in that study was developed in light of the subsequent insights and reflections in the literature. The extended critique has identified areas of weakness and gaps to be addressed. They have been developed into research questions. These research questions will be augmented by the literature review of empirical studies that follows in chapter 3.

CHAPTER 3

REVIEW OF LITERATURE: EMPIRICAL STUDIES INVESTIGATING IMPRESSION MANAGEMENT IN ACCOUNTING NARRATIVES IN CORPORATE REPORTS

3.1 Introduction and overview of chapter

This chapter reviews the empirical literature investigating impression management in accounting narratives in corporate reports. There are two reasons for including this review. The first relates to the methodological contribution of the study; the second, to the empirical contribution.

The critique of the existing methods of text evaluation in the previous chapter highlighted areas of weakness and gaps that might potentially be exploited. In this regard, three specific research questions were identified. As indicated in section 2.7, these research questions are in pursuit of the primary research objective of the study (Table 1.1 and section 1.2.2.1). In addition to developing methods in response to areas of weakness and gaps identified through a methodological critique, methods are developed in this study specifically with a view to investigating impression management. In particular, the methods will be developed cognisant of the research designs and measurement models used by accounting researchers in such investigative studies. The literature review in this chapter will identify these dimensions. The empirical application reported in chapter 7 will demonstrate the aptitude of the methods for use in such studies. This orientation towards the investigation of impression management recognises the importance of the impression management literature, both in terms of the focus of the accounting research community and the associated policy issues (section 1.4).

In relation to the empirical contribution of the study, the review here will provide an appropriate context both for developing the empirical application and for discussing the results. In terms of developing the application, the review will identify an appropriate focus in terms of accounting narratives and an appropriate geographical context for study.

To date, as far as the author is aware, there has been no comprehensive review of this nature published in the literature. The literature review presented in this chapter is,

therefore, offered as a specific research contribution in its own right. There are, of course, clear similarities with J&S. The literature coverage, encompassing both the accounting and managerial literature, is similar. There are similarities in terms of the sub-categorisation of the literature. The orientation of their study, however, was to review and critique the use of content analysis, both syntactic and thematic, as a method in the accounting domain. The issues and research questions associated with the investigation of impression management, while undoubtedly embraced by their study, was not the primary focus. By contrast, the review presented in this study takes impression management as its primary focus. Further, much of the literature included here was published after Jones and Shoemaker's review, evidence of the emergent nature of the impression management literature and its increasing importance as an area of study. In summary, the literature review presented here can be seen as complementary to J&S, since the methods in this thesis are developed both in the context of their critique and with an expressed orientation towards the investigation of impression management. Of the published impression management literature, a critical essay by Gallhofer *et al.* (2000) provides an overview of the empirical literature, but is not developed to any level of detail. Finally, in two brief papers by way of contextualisation, Jones (1994 and 1996b) reviews in detail one particular dimension of the impression management literature. Finally, the scope of the literature review presented in this chapter extends only to published studies.

The structure of the chapter is as follows. Sections 3.3 outlines an approach to categorising the studies reviewed. Sections 3.4 to 3.6 comprise a detailed review of the empirical literature, taking each category separately. In a synthesis of the empirical evidence, section 3.7 reflects on the evidence for impression management and the overall allocation of attention in the literature. Section 3.8 identifies, from the literature, a number of specific requirements of accounting researchers investigating impression management. The research designs and measurement models identified will serve as a referent for the development of methods in this study. Section 3.9 identifies a number of research questions arising. These research questions augment those developed in the context of the literature review in chapter 2 (section 2.7 and Table 2.2). Section 3.10 summarises and concludes on this chapter and, together with chapter 2, on the literature reviewed in this study as a whole.

Before turning to a detailed review of studies investigating impression management in accounting narratives, however, it is helpful to set the research into accounting

narratives in the context of the impression management literature as a whole. Section 3.2 provides a brief contextualisation.

3.2 Impression management literature

The term impression management (also called self-presentation) refers to the process by which individuals attempt to control the impressions others form of them (Leary and Kowalski, 1990, p. 34 (see also e.g. Brown (1997); Carter and Dukerich (1998); Gardner and Avolio (1998)). The traditional and early focus of research in accounting which can be subsumed under a focus upon impression management was on accounting numbers management (see e.g., Schipper, 1989; Tweedie and Whittington, 1990). The focus has developed to encompass the wider documentary context of the annual report (Hopwood, 1996) and, in particular, the use of graphical, visual and narrative media to disclose financial information. A number of studies investigating graphical disclosure in corporate reports find evidence of presentational management to present the corporate image in as favourable a light as possible (see e.g., Johnstone *et al.* (1980); Steinbart (1989); Beattie and Jones (1992a; 1992b; 1993; 1994a; 1994b); Mather *et al.* (1996); Beattie and Jones (1996; 1997); Courtis (1997); Beattie and Jones (1998; 1999); Mather *et al.* (2000); Beattie and Jones (2000a; 2000b; 2001)). Similarly, a number of studies investigating visual disclosures in corporate reports find evidence of presentational management (see e.g., Graves *et al.* (1996); McKinstry (1996); Preston *et al.* (1996); Preston and Young (2000)). Studies investigating impression management in accounting narratives are, therefore, part of a wider corpus of literature whose focus is the wider documentary contexts of corporate reports.

3.3 Impression management in accounting narratives: categorisation of studies

Given the significant number of studies included in the literature review, some categorisation is necessary. A number of approaches to categorisation are possible. For example, studies might be categorised in relation to generic themes that are prevalent throughout the literature. Three themes, in particular, are evident: overall valence of news, attribution of news and differentiation between 'good performers' and 'poor performers'. Studies might also be categorised in terms of research design, for example, tests of association and tests of differentiation. Although these approaches to categorisation are reflected in part in this literature review, they are not the main determinant of categorisation. The primary focus is to categorise studies in terms of the particular textual characteristic or dimension that is their primary focus of attention. Three categories are identified.

1. **Syntactic structure**
2. **Patterns of causal reasoning and attribution**
3. **Thematic content**

The rational for adopting this categorisation is motivated primarily by the *overall* methodological orientation of the study. By focusing on the particular characteristics of the narrative that hitherto have received the attention of researchers, areas of weakness and gaps that might potentially be addressed, can be identified. In broad terms this mirrors the categorisation used in chapter 2 (section 2.3 and relevant sub-sections). One difference, however, should be noted. In chapter 2, studies investigating patterns of causal reasoning and attribution and studies investigating thematic content were included together under methods of thematic analysis (section 2.3.2). They are separately identified here, principally because one of the methods developed in this study has a theoretical basis, which links to attribution theory. For categories 1 and 3 some further sub-categorisation is necessary. The rationale for this sub-categorisation is explained in sections 3.4 and 3.6 respectively. Table 3.1 summarises the relationship between chapters 2 and 3 in terms of structure.

Table 3.1
Correspondence between chapters 2 and 3

Sect.	**Chapter 2**	*Sect.*	**Chapter 3**
2.3.1	Methods of syntactic analysis	*3.4*	Category 1: Studies investigating syntactic structure
2.3.2	Methods of thematic analysis	*3.5*	Category 2: Studies investigating patterns of causal reasoning and attribution
2.3.2	Methods of thematic analysis	*3.6*	Category 3: Studies investigating thematic content

Allocating the literature in terms of this structure is, in the main, relatively straightforward. Two studies are included in more than one category (Staw *et al.* (1983) and Kohut and Segars (1992)). Explanations will be provided in the relevant sections. Only those studies whose focus is narratives in corporate reports are included. Studies which investigate footnotes / notes to the accounts are also excluded. Of the studies

reviewed in this chapter which encompass footnotes / notes to the accounts as part of their review, those parts are excluded. A number of the studies included in this literature review, investigate impression management as one aspect of what is a broader study. In such cases, only those aspects of the study expressly concerned with investigating impression management are reviewed. Finally, while the objective is to provide a comprehensive review, it does not claim to be exhaustive. This is particularly so in relation to the social and environmental disclosure literature reviewed in section 3.6.3.

For each of the three main categories an overall summary of the empirical evidence will be included.

3.4 Category 1: Studies investigating syntactic structure

The studies included in this section can be readily partitioned into those investigating readability (section 3.4.1) and those investigating other aspects of syntactic structure (section 3.4.2).

3.4.1 Readability studies

A number of studies have investigated readability in accounting narratives, specifically with a view to investigating impression management (e.g. Adelberg, 1979; Courtis, 1986; Jones, 1988; Baker and Kare, 1992; Kohut and Segars, 1992; Smith and Taffler, 1992b; Subramanian *et al.,* 1993; Courtis, 1995; 1998; Clatworthy and Jones, 2001). The central focus of these studies is the relationship between readability and performance, measured primarily by profitability.

Before reviewing the readability studies in detail, some clarification of terminology will be helpful. The term 'obfuscation' is referred to in a number of studies (e.g. Adelberg, 1979; Courtis, 1998; Clatworthy and Jones, 2001), in relation to managements' incentive to "obfuscate their failures and underscore their successes" (Adelberg, 1979, p. 187). In terms of readability, obfuscation is associated with lower levels of readability. Courtis (1998) articulates this in terms of the 'obfuscation hypothesis'. Although the hypothesis is stated in general terms, namely "that management is not neutral in its presentation of accounting narratives" (p. 466), it is perhaps helpful to restrict the terminology to the readability literature, in which it is stated.

With the exception of Jones' (1988) longitudinal study of one company from 1952-1985, all of the studies adopted a cross-sectional, multi-firm approach. With the exception of Adelberg (1979), which used the reader-focused cloze-readability procedure and Kohut and Segars (1992), which used a mixture of manual and computerised coding, all of the studies used formula-based readability measures. The most common measure used was the Flesch reading ease formula.

A number of accounting narratives were investigated: the Chairman's statement or President's letter in Canadian corporate reports (Courtis, 1986), Hong Kong corporate reports (Courtis, 1995, 1998), UK corporate reports (Jones, 1988; Smith and Taffler, 1992b; Clatwothy and Jones, 2001) and US corporate reports (Baker and Kare, 1992; Kohut and Segars, 1992; Subramanian *et al.,* 1993); the US MD&A (Adelberg, 1979) and US qualified audit reports (Adelberg, 1979).

A number of performance measures were used. A summary table of performance measures and other variables tested in these studies can be found in Jones (1994). Of the studies not included in that review, Kohut and Segars (1992) used return on equity and Courtis (1995) return on investment. Courtis (1998) added a further variable and a further dimension of measurement, both specifically oriented towards investigating impression management. In addition to percentage change in profit, the frequency of a firm's financial press coverage was included as a variable, based on the *a priori* expectation that companies in the "public eye" may seek to reduce the chance of interference from investors, government and regulatory agencies by obfuscation (p. 462). The additional dimension of measurement was readability variability. On the premise that good news and bad news is conveyed at different points in the narrative, Courtis argued that managements will seek to divert the attention of the reader from the full impact of negative news by varying the degree of reading ease throughout the narrative (p. 467). In other words, managements will seek to obfuscate specific bad news disclosures within the narrative. Clatworthy and Jones (2001) used percentage change in profit before taxation to determine sets of "good performers" and "poor performers". Building on Courtis (1998) they investigated in detail the dimension of readability variability.

In two short commentaries, by way of contextualisation of two of the above empirical studies (Subramanian *et al.*, 1993 and Courtis, 1995), Jones (1994, 1996b) reviewed the empirical evidence. His concern was not only to search for emerging patterns in the

readability research investigating impression management, but also to contextualize that research within a broader literature investigating impression management in accounting narratives. Taking the readability studies in isolation, while there is some confusion and contradiction, Jones (1996b) refers to an "emerging consensus" (p. 88), that there is a relationship between readability and performance, suggestive of the view that readability may be one of the characteristics of accounting narratives which managements may, consciously or unconsciously, manipulate. This view is strengthened when the readability and performance results are seen in the context of evidence from a broader literature, which is suggestive of a lack of neutrality in managements' presentation of accounting narratives (p. 88).

The study by Kohut and Segars (1992), which is not included in either of these commentaries, found the narratives of 'good performers' to be more verbose than those of 'poor performers'. "Such findings may suggest that 'good news' messages (high performance) are cause for more elaboration in the president's letter. In contrast, unfavourable results may be communicated in a more concise manner with little elaboration" (p. 13). These results suggest that, rather than seeking to obfuscate their failures, managements will disclose 'bad news' in a concise, abrupt manner. This study is also reviewed in section 3.6.2 below.

Courtis (1998) investigated the presence of variability of readability scores in the Chairman's statement of Hong Kong companies. All of the narratives investigated displayed statistical variability in readability. Moreover, a discernible reading ease pattern was evident, with the first 100-words the easiest to read, the second 100-words the most difficult to read, with the middle difficulty section at the end (p. 468). Courtis argued that the prevalence of variability raises the obfuscation hypothesis (p. 466). Accordingly, the variability and readability scores of 'good performers' and 'poor performers' and 'high press coverage firms' and 'low press coverage firms' were compared. The justification for including the frequency of a firm's financial press coverage as a variable was discussed above. With the comparison of 'good performers' and 'poor performers', virtually identical group variability and readability means do not support the obfuscation hypothesis. With the second variable, the frequency of a firm's financial press coverage, significant differences in group variability and readability means support the obfuscation hypothesis (p. 468). In concluding, Courtis offers a caveat to his discussion, in arguing that "the presence of variability must be accounted for more deliberately in future readability research" (p. 468). Moreover, he notes in the

footnotes to his study that, in addition to those articulated as operational hypotheses in the study, alternative obfuscation hypotheses in relation to variability are possible (p. 470).

This dimension of variability is discussed, albeit to a limited extent, in Staw *et al.* (1983). The main focus of this study is causal attribution and will be reviewed in detail in the section 3.5 below. In terms of variability, however, "the art of presenting good and bad news" (p. 596) was investigated by analysing positive and negative events according to their location in the narrative. The particular narrative studied was the US President's letter. Perhaps the most interesting observation was that "low-performing firms relay more negative news at the outset and then end their letters on an upbeat tone that is nearly as positive as the information presented by successful companies" (p. 597). The underlying strategy may be to lessen the impact by presenting any negative information early in their reports and moving quickly to more positive events (p. 598).

Building on the study by Courtis (1998) and in particular his call for further research into readability variability (referred to above), Clatworthy and Jones (2001) is a replication study based on the Chairman's statements of 30 profitable and 30 unprofitable UK company annual reports (p. 323). Whilst finding support for Courtis' finding that the first passage in the Chairman's statement is the easiest to read, the results fail to support Courtis' obfuscation hypothesis (Clatworthy and Jones, 2001, p. 323). If the prevalence of variability does not raise the obfuscation hypothesis, then some other plausible explanation must be sought. In this regard, Clatworthy and Jones find results in support of the hypothesis that the underlying thematic structure of the Chairman's statement will determine its readability (p. 322-3). In relation to differentiation between profitable and unprofitable companies, they found "no real statistical evidence that the thematic structure of profitable companies is different from unprofitable companies" (p. 322). Interestingly, while their overall findings run counter to the argument propounded by Courtis (p. 320), they find that the opening section of the Chairman's statement is comparatively more easy to read for profitable companies than unprofitable companies, which may indicate an impression management strategy on the part of 'poor performers'.

3.4.2 Other dimensions of syntactic structure investigated

In addition to readability, other dimensions of syntactic structure have been investigated in relation to impression management.

Thomas (1997) investigated syntactic structure in the President's letters to shareholders for a particular US company over a five-year period. During this period, the company experienced a systematic down turn in performance, beginning with a period of prosperity and ending with severe losses. The objective of the study was to investigate the linguistic differences between 'good news' and 'bad news' annual reports. The aspects of syntactic structure investigated were transitivity (verb type and verb form), thematic structure, context, cohesion and condensations. Overall, the study found that in both 'good news' and 'bad news' annual reports, the use of particular linguistic structures was associated with management's intention to maintain its public image and to protect itself from criticism. In particular, "as the news becomes more negative, linguistic structures suggest a factual, "objective" situation caused by circumstances not attributable to any persons who might otherwise be thought responsible" (p. 47).

Hyland (1998a) compared the Chairman's statement and Directors' report of 137 high- and medium-performing Hong Kong companies in order to show how companies use the Chairman's letter to influence readers and project a positive corporate image. The particular dimension of syntactic structure investigated was metadiscourse, a term that Hyland takes to refer to those aspects of text structure which are employed in strategic narrative construction. On the basis of a higher level of metadiscourse observed for the Chairman's statement when compared with the Directors' report, the study concluded that the Chairman's statement is used strategically in order to direct readers as to how they should understand and appraise the subject matter (p. 224).

The particular approaches to syntactic analysis employed by Thomas (1997) and Hyland (1998a) will be discussed further in sections 4.3.1 and 4.3.2, respectively.

3.4.3 Synthesis of category 1: Studies investigating syntactic structure

This section has reviewed those studies which have investigated impression management in accounting narratives with a particular focus on syntactic structure. The vast majority of studies focus on readability as measured by readability formulas, although the studies by Thomas (1997) and Hyland (1998a) indicate that there are aspects of syntactic structure not encompassed by readability measures.

Overall, the studies reviewed provide evidence, which is suggestive of the view that managements exploit syntactic structure as an impression management tactic in accounting narratives. The issue as to whether that exploitation is conscious or unconscious is interesting. Both Thomas (1997) and Hyland (1998a) suggest that writers engage in a level of strategic narrative construction beyond the propositional content or the subject matter of the text. The writer has an instinctive awareness of this level of construction, a level of construction, which, in turn, has a distinctive effect on the reader.

A significant degree of caution, however, must be observed in drawing definitive conclusions from these studies, in particular, with regard to the readability studies. On the one hand, there is a fair degree of contradiction in the empirical findings. Also, it is of note that the readability studies reviewed here are only a small sub-set of what is an extensive corpus of readability research in the accounting literature. In their review article, Jones and Shoemaker (1994) identified 26 readability studies of accounting narratives in corporate reports. Given the increasing importance of the impression management literature in accounting, the relatively small number of readability studies might be considered surprising, particularly given the widespread use of the research instrument in prior studies investigating accounting narratives. This is due to the widely acknowledged weaknesses of readability formulas as a research instrument, and the absence of alternative approaches (see section 2.6).

3.5 Category 2: Studies investigating patterns of causal reasoning and attribution

A number of studies in the managerial literature have focused on the attributional content of the President's letter in US corporate reports from an impression management perspective (Bettman and Weitz, 1983; Ingram and Frazier, 1983; Staw *et al.*, 1983; Salancik and Meindl, 1984). Based on *a priori* expectations, it is hypothesised that company managements will adopt a self-serving strategy in the patterns of causal reasoning they use to explain or account for company performance. A self-serving strategy can take two forms: 'enhancement', whereby managements systematically take credit for 'good news', by attributing 'good news' to internal factors under their own control; and 'defensiveness', whereby managements distance themselves from 'bad news' by attributing 'bad news' to external factors, beyond their control.

In common with much of the impression management literature, there are two themes which characterise these studies. These themes can be captured in the following hypotheses. First, that all managements pursue a self-serving strategy in the patterns of causal reasoning they use to explain or account for company performance and second, that this tendency is particularly evident for 'poor performers'.

Bettman and Weitz (1983) examined reports published in 1972 and 1974. The 83 reports from 1972 were representative of a 'good year', while the 98 reports from 1974 were representative of a 'bad year'. For both years, a self-serving pattern of attributions was observed, whereby "unfavourable outcomes were attributed more to external, unstable, and uncontrollable causes than were favourable outcomes" (Bettman and Weitz, 1983, p. 165). Overall, approximately 60 percent of favourable outcomes were attributed internally, whereas only 27 percent of unfavourable outcomes were attributed internally. Comparing the two years, while the proportions of favourable outcomes attributed to internal causes does not differ, the proportions of unfavourable outcomes attributed to external causes do differ, with failure attributed more to external causes in a bad year (pp. 178-179). The study also found that the Letters to Shareholders contained a greater amount of directed causal reasoning when performance was unfavourable. Ingram and Frazier (1983) found that managements attributed good news to their own efforts, while blaming bad news on external factors.

Staw *et al.* (1983) examined reports taken from one fiscal year (1977/78). Forty-six companies with significant earnings increases were compared to 29 companies with significant earnings decreases. This study differed from Bettman and Weitz (1983) in that the companies included in the sample were categorised as 'good performers' and 'poor performers'. Overall, "[l]etters to shareholders were found to show strong evidence of self-serving attributions" (p. 582). Comparing 'good performers' and 'poor performers', the study finds that "[a]s expected, the more negative the shareholders' letters, the greater was the attribution to industry and environmental causes and the less was the attribution to company causes. As a more sensitive test of self-serving attributions, the proportion of negative effects in all Presidents' letters (across both high- and low- performing companies) was related to causal attribution. As expected, the more negative was the shareholders' letter, the greater was the orientation to past rather than future events, and the greater were the number of events reported before the financial statement as well as in the letter as a whole" (pp. 591-592). Finally, the

positive (negative) attributions were correlated with increases (decreases) in stock prices.

Salancik and Meindl (1984) examined 324 reports from each year from 1961 to 1978 for 9 'good performers' (which they referred to as 'stable firms') and 9 'poor performers' ('unstable firms'). Corroborating the results of Bettman and Weitz (1983) and Staw *et al.* (1983), Salancik and Meindl (1984) found that "[f]irms on the average, attributed positive outcomes more to internal than to external causes and attributed negative outcomes more to external than to internal causes" (p. 246). When comparing 'stable firms' with 'unstable firms', however, the study found that attributional tendencies differed; in particular, that the managements of 'unstable firms' accepted responsibility for both good and poor performance, more often than did managements of 'stable firms'. While it might be considered that these findings weaken the argument that managements are self-serving in the patterns of causal reasoning adopted to explain corporate performance, Salancik and Meindl argue that attributional styles result from intentional strategic attempts to create a sense of management's effectiveness and control over the welfare of the corporation (p. 252). Applying this argument to the attributional tendency shown by unstable firms in their study, they suggest that "[t]he tendency shown by unstable firms to take more responsibility for outcomes, regardless of whether they were good or bad, is what managements would do if they needed to convince constituents of their ability to direct the corporation more effectively" (p. 252).

Studies by Clapham and Schwenk (1991) and Wagner and Gooding (1997) provide further evidence of self-serving bias in terms of patterns of causal reasoning and attribution in a US context. The latter study, although not focusing directly on annual report narratives is included here because it provides an excellent synthesis of this grouping of US attribution studies. Referring collectively to these studies, they note that "findings, drawn from data that often spanned several years of observation, indicated that such positive outcomes as high profit margins, sales, earnings per share, and revenue growth were routinely credited to internal, organizational origins, whereas such negative outcomes as low profit margins, sales, earnings per share, and revenue decline were typically ascribed to external, environmental considerations" (Wagner and Gooding, 1997, p. 276).

Aerts (1994) investigated patterns of causal reasoning in the 1983 Directors' reports of 50 Belgian companies and was the first study in this area written from an accounting

rather than a managerial perspective. Building on the prior research, Aerts added the dimension of 'attributional framing' to 'attributional content', the focus of the three US studies. This new dimension is concerned with the language that is used to frame the attribution. Based on *a priori* expectations, Aerts hypothesised an accounting bias, "as a tendency to explain negative performances more in technical accounting terms and positive performances more in strict cause-effect terminology" (p. 337). Overall, the study found that managements were three times more likely to attribute positive outcomes to internal rather than external causes. In relation to negative outcomes, however, no significant defensive component was observable in terms of a cause-effect relationship. Investigating the language used to explain performance outcomes, or attributional framing, Aerts observed "a tendency to use accounting explanations more for contextualizing negative accounting effects than for attributing positive accounting effects" (p. 349). Aerts argued that technical accounting explanations obscure the perception of the tendency to use (external) excuses and justifications for negative outcomes and therefore, the accounting bias is to be interpreted as an inherently defensive verbal tendency. Intuitively, links can be made here with the readability literature and, in particular, the obfuscation hypothesis (Courtis, 1998), whereby managements will seek to obfuscate failures by means of syntactic complexity. Aerts (1994) also investigated the impact of performance stability on the use of accounting explanations and found that the defensive accounting bias is prevalent only is stable firms and not in unstable firms, indicating that "[t]he effectiveness of accounting explanations as a rationalizing device does not seem to hold when circumstances remain ambiguous and unstable" (p. 350).

While the attribution studies referred to above rely on cross-sectional data, Aerts (2001) investigated the change in narrative explanation practices over time. The Directors' reports for a sample of 23 Belgian corporate reports were analysed over an eight-year period, with a particular focus on the extent to which attributional content and framing changed over time, and whether these changes were related to certain organisational characteristics of the reporting companies, conceptualised as potential sources of inertial forces (Aerts, 2001, p. 3). Overall, the results of the study indicated that the inertial factor is strong, with the attributional characteristics showing a high degree of stability over time (p. 29). Looking at the results in more detail, of particular significance (referred to as an "overwhelming observation" in the study (p. 29)), was the consistently high level of positive outcomes and the non-responsiveness of this level to overall

performance change. This is suggestive of a further impression management strategy. Rather than, for example, attribute negative news to external factors, frame it in technical accounting language, or (to draw on the terminology from the readability literature) obfuscate it, management may simply suppress it. Although not the primary focus of the study, Staw *et al.* (1983), one of the US studies of attributional content, find that both high-performing *and* low-performing firms have an overall positive emphasis. Commenting on this, and in light of the comments above, they suggest that this may be evidence of another means or mechanism of effecting positive self-presentation, namely the simple emphasis of positive rather than negative news (Staw *et al.,* 1983, p. 596).

Studies by Bowman (1976, 1978), although not focusing directly on the patterns of causal reasoning to explain corporate performance, are closely related to the attribution studies. Bowman (1976, 1978) investigated the President's letter in US corporate reports and found that less successful and more successful companies stressed different factors. Less successful companies discussed external factors affecting performance, while more successful companies discussed their own strategic directions. Ingram and Frazier (1983), again focusing on the US President's letter, found that managements attributed good news to their own efforts, while blaming bad news on external factors. These findings are consistent with the patterns evident in the attribution literature.

Building specifically on the studies by Bettman and Weitz (1983), Staw *et al.* (1983) and Salncik and Meindl (1984), D'Aveni and MacMillan (1990) focused on the allocation of attention for the narrative as a whole, rather than limiting the analysis only to those statements that attributed blame or used causal reasoning. Further, D'Aveni and MacMillan's particular focus was on managements' reporting practices in a time of crisis. Their sample consisted of 57 bankrupt firms and 57 matched survivors. The President's letters for the five years preceding the bankruptcy were analysed to determine the relative extent of managements' attention to their external (input and output) and internal environments (p. 634). "Results indicate that under normal circumstances managers of surviving firms pay equal attention to the internal and external environment and more attention to the output environment than to the input environment. When a crisis of demand decline occurs, they pay more attention to the critical aspects of their external environment. In contrast, managers of failing firms deny or ignore output factors during crisis and pay more attention to the input and internal environments" (p. 634). This latter observation for troubled firms appears contradictory both to the pattern evident in the attribution literature and the studies by

Bowman (1976, 1978). D'Aveni and MacMillan (1990) explain their results in terms of the focus of their study. "[T]hese previous studies looked at excuse making and self-serving attributions, not attention…When we stripped away the causal attribution language from references to various aspects of the environment, we found results that were not predictable from the findings of these earlier studies of impression management" (p. 651). This explanation cannot account for the contradictory results of Bowman (1976, 1978) whose concern, like D'Aveni and MacMillan (1990), was the narrative as a whole. A more plausible explanation might be that the 'crisis factor' is significant. It is interesting to note that D'Aveni and MacMillan's 'contradictory results' are based primarily on the time period t-1. Also, the findings here for failing firms are corroborated to some extent by Salancik and Meindl's (1984) findings for unstable firms.

Finally, in an experimental study, Kaplan *et al.* (1990) investigated the effects of the President's letter and stock advisory service information on financial decisions. Subjects received four different President's letter scenarios in the context of a non-changing set of primary financial statements of a poorly performing company. The four President's letter scenarios were as follows: the excuse treatment; the justification treatment; focus on future performance treatment; and finally, the absence of a President's letter. These scenarios can be considered impression management strategies (p. 70). Of the three different letters, the excuse treatment was the least effective in positively influencing decisions (pp. 78-9). These results corroborate the findings in Salancik and Meindl (1984). The justification strategy was more effective than the excuse treatment, the change strategy the most effective.

To summarise, this section has reviewed those studies that have investigated impression management in accounting narratives with a particular focus on patterns of causal reasoning and attribution. A number of dimensions have been investigated encompassing attributional content, attributional framing and overall allocation of attention. Although some caution must be observed, when taken together, the studies provide empirical evidence that managements pursue a self-serving strategy in the patterns of causal reasoning they use to explain or account for company performance and, second, that this tendency is particularly evident with 'poor performers'.

3.6 Category 3: Studies investigating thematic content

Studies investigating thematic content are wide-ranging, both numerically and in terms of research focus. Accordingly, some sub-categorisation is necessary. One approach would be to elaborate upon the primary categorisation, namely the particular characteristic or textual dimension that is the focus of attention. While dimensions such as key words and themes could be separately identified, this is not considered a fruitful approach to sub-categorisation, in particular, since a number of studies investigate thematic content using a combination of key words and themes. Moreover, the relative preponderance of studies investigating these different dimensions would not justify a sub-categorisation at this level.

The sub-categorisation adopted here reflects, as far as possible, existing, readily identifiable categories in the literature. Three sub-categories are identified.

1. Association between narrative disclosures and financial performance
2. Differentiation between 'good performers' and 'poor performers'
3. Social and environmental disclosures

The studies included in sub-categories 1 and 2 reflect the groupings in terms of research questions and research design that are evident throughout the impression management literature (see section 3.8). Finally, the social and environmental disclosure literature, as a separately identifiable sub-set of the accounting literature as a whole, is separately identified here.

3.6.1 Association between narrative disclosures and financial performance

A number of studies have investigated the association between thematic content and financial performance. Studies can be partitioned further into those whose primary focus is the relationship between narrative disclosures and current performance (section 3.6.1.1) and second, those whose focus is future performance (section 3.6.1.2).

3.6.1.1 Association between narrative disclosures and current financial performance

Abrahamson and Park (1994) analysed the President's letter for more than 1,000 US companies for negativity, an index score based on the relative preponderence of 'positive' / 'negative' keywords. The negativity index serves as a proxy for negative organizational outcomes. Their intention was to determine if, when, and how intentionally corporate officers conceal negative organizational outcomes (p. 1302).

The central thesis was that, by studying the effects of shareholders, directors and accountants on corporate officers' communications to shareholders, it could be established if and when concealment occurred. It was argued that, if these constituent groups affected the disclosure of negative organizational outcomes, that evidence would be consistent with the claim that officers tend to conceal such outcomes unless they are forced to disclose them (pp. 1328-1329). Overall, the results provide some evidence that the degree of negativity is contingent upon corporate ownership patterns, whereby certain types of shareholders and directors prompt officers to reveal negative outcomes, whereas others promote concealment (p. 1329).

Employing the same negativity index approach as Abrahamson and Park (1994), Abrahamson and Amir (1996) analysed 1,325 President's letters in US corporate reports for 1987 disclosures and found the information in the President's letter (expressed in terms of the negativity index) to be consistent with the reported financial information (p. 1158). They note that "[t]his result is far from being obvious because management might have used the narrative portions of the annual report to reduce the effect of bad news or to smooth the effect of good news" (pp. 1158-1159).

Hildebrandt and Snyder (1981) analysed the President's letter in US corporate reports for positive and negative keywords and observed a reporting bias in favour of 'good news'. Specifically, they confirmed what they referred to as the 'Pollyanna Hypothesis', that, regardless of the financial state of the company, the language will be predominantly positive (p. 5).

In two studies of Management's discussion and analysis in Canadian corporate reports, the Ontario Securities Commission (OSC, 1990, 1992) identified, as a common deficiency, the over emphasis of positive factors, with little or no reference to negative ones and the use of vague statements without enough detail to permit an understanding of the issue.

The accounting firm, Arthur Andersen (1996), surveyed narrative reporting in the 1995 year-end corporate reports of 100 listed UK companies. The particular narrative investigated was the *Operating and Financial Review* (OFR). Although not approaching the issue from an impression management perspective, when comparing the events or transaction reported in the financial statements with those discussed in the OFR, the study found "that companies are being more selective in the matters which

they discuss in the narrative than those they disclose in the financial statements" (p. 10). The Arthur Andersen study is one of only a small number of empirical studies that have focused on the OFR. Other studies include Weetman *et al.,* (1994, 1995), Weetman and Collins (1996), Kirk (1997), Schleicher and Walker (1999) and Sydserff and Weetman (1999). The study by Schleicher and Walker (1999) is reviewed in section 3.6.1.2 below. Of the other studies listed, while none is expressly concerned with investigating impression management, they do provide some interesting tangential evidence. For example, Weetman *et al.* (1995) and Weetman and Collins (1996) surveyed narrative disclosures contained in OFRs in the first and second years of implementation respectively. Companies were ranked according to their compliance with the 'spirit of the OFR'. The researchers found significant variation in terms of companies' compliance with this spirit. If the 'spirit of the OFR' is taken to be a proxy for quality, then it might be inferred from the differential quality that managements engage in some form of impression management in preparing the OFR. In the later of the two studies, the researchers conclude that "preparers of the OFR wish to remain very much in control of its style and content" (Weetman and Collins, 1996, p. vii).

3.6.1.2 Association between narrative disclosures and future financial performance

A number of studies have investigated the realisation of prospective information in a firm's narrative disclosures by focusing on the accuracy of profit forecasts (e.g., Dev, 1974; Platt, 1979; Barnes and Brown, 1981; Steele, 1982). Dev (1974), Barnes and Brown (1981) and Steele (1982) investigated the predictability of narrative disclosures in the Chairman's statement of UK companies. "In general, they find that the forecasts are accurate about fifty percent of the time" (in Tennyson *et al.*, (1990, p. 393)). Platt (1979) analysed forecasts in terms of variance to actual results and concludes that while the likelihood of a forecast being correct within five percent is not particularly good, a variance of more than twenty percent is likely in only about twenty eight percent of forecasts. Dev (1974) comments that the "information provided by many companies tends to be imprecise and not to extend beyond the current year" (p. 273). Platt (1979) adopts a more optimistic tone and comments that "the evidence seems to indicate that profit forecasts are borne out by results in a sufficient proportion of instances for it to be useful for them to be available" (p. 97). Caution should be exercised, however, when interpreting these results given the different measures of forecast accuracy used in these studies.

Pava and Epstein (1993) tested the eventual realisation of future-oriented disclosures in a sample of 25 MD&A's from 1989 corporate reports. They found evidence of what they termed managerial bias, whereby "management is much more likely to correctly anticipate and disclose good news relative to bad news" (p. 52). Observing a forty percent accuracy correlation, they conclude that (relatively) few companies provide useful and accurate forecasts.

Bryan (1997) measured the association between mandated disclosures in the MD&A of 1990 US corporate reports, and future financial performance. In addition, the study investigated whether the MD&A disclosures were consistent with decisions made by one segment of the investment community – financial analysts (p. 287) and whether MD&A variables were associated with stock returns. For the seven themes, disclosures were classified as 'favourable', 'unfavourable' or 'neutral' / 'missing'. Future performance was measured in terms of one-, two-, and three-period-ahead financial variables. Results indicated that "certain MD&A variables are positively and significantly associated with one-period-ahead changes in sales, earnings per share and capital expenditures, but not operating cash flows. The longer term associations are generally not significant" (p. 298). In relation to analyst forecasts, again some positive and significant association was observed for certain variables. Finally, one of the variables (capital expenditure disclosure) is associated with current and future stock returns (p. 298). Taking the results overall, while there is some evidence that prospective or future-oriented disclosures in the MD&A can assist in assessing a firm's future short-term prospects, for a number of MD&A variables no association was found.

Schleicher and Walker (1999) investigated the predictive value of the various discretionary narrative disclosures contained in the UK equivalent of the US MD&A. They refer to these disclosures collectively as management discussions of operations and financing (p. 321), disclosures based upon the recommendations in the ASB's statement of best practice for narrative reporting, *the Operating and Financial Review* (OFR) (ASB, 1993). Given the 'best practice' status of the OFR, where compliance is voluntary, the narrative disclosures investigated by Schleicher and Walker (1999) are discretionary. This is in contrast to Bryan's (1997) investigation of mandated disclosures in the MD&A. The discretionary nature of the OFR renders it a potentially fruitful data source for the investigation of impression management. The research question investigated by Schleicher and Walker is "to test directly whether increased discretionary disclosure levels in the published annual report result in a better informed

stock market (p. 322). Better informed is interpreted as the ability of the market to anticipate earnings changes. This research question is motivated directly by the ASB's rationale for the development of narrative reporting, articulated in the introduction to the OFR statement – "It [the OFR] would therefore give users of the annual report a more consistent foundation on which to make investment decisions regarding the company" (ASB, 1993, p. 2). The quality of discretionary disclosures is measured by a disclosure index. Overall, results are mixed, although, for the one-period-ahead and two-period-ahead share price anticipation and with regard to the particular dimension of the disclosure index that captured forward-looking information, results were suggestive that discretionary narrative disclosures were useful in predicting future earnings changes (Schleicher and Walker, 1999, p. 321).

3.6.2 Differentiation between 'good performers' and 'poor performers'

A number of studies have investigated differences in thematic content between the narratives of 'good performers' and 'poor performers' (e.g. Frazier *et al.,* 1984; McConnell *et al.,* 1986; Swales, 1988; Tennyson *et al.,* 1990; Kohut and Segars, 1992; Smith and Taffler, 1995; Smith, 1998; Ober *et al.*, 1999; Smith and Taffler, 2000).

Frazier *et al.* (1984) searched for systematic differences in terms of themes between the President's letters in corporate reports of US firms grouped according to hypothesised incentives for management to misrepresent firm performance. Firms were grouped according to performance (based on percentage earnings growth) and whether Management Controlled (MC) or Owner Controlled (OC). The method of analysis employed was the *WORDS* computerised content analysis system. While the themes identified distinguished clearly between 'good performers' and 'poor performers', more thematic similarity than difference was observed between MC and OC firms (p. 326). Commenting on the similarity observed between OC and MC firms, the researchers suggest that the results may indicate that bad news firms (poor performers) may provide signals that imitate good news firms, thus interjecting ambiguity into the disclosures" (p. 326). The study also investigated the predictive ability of the narrative content scores. It was hypothesised that if managers of 'poor performers' were attempting to misrepresent performance, the disclosures provided in the annual reports should not have been indicative of the firms' future performances (p. 326). Results indicated that narrative disclosures were useful for predicting the future performance.

In another US study, McConnell *et al.* (1986) searched for systematic differences in terms of themes between the President's letters of 'good performers' and 'poor performers'. Significant differences, in terms of word counts devoted to each theme, were found between 'good performers' and 'poor performers', for five of the nine themes identified.

Swales (1988) analysed the President's letters of 58 US firms from five industries over a three-year period. The particular industries selected offered investors the highest total returns in each year. For each year, the firms were classified into two groups according to their total return (based on dividends and price appreciation for that year). In addition, the President's letters of a further sample of 40 firms from ten industries were analysed for one year. The particular industries selected for this second sample were those with the overall highest market valuations. Once again, firms were classified into two groups. Group 1 represented firms with the highest valuations for the industries selected. Group 2 represented firms with the lowest valuations. The rationale for this method of sample determination was that "if differences across firms could be found among the top industries, then more pronounced differences were likely to exist in industries further down the line" (p. 71). Having first classified themes by identifying recurring words or phrases, the Statistical Analysis System (SAS) stepwise discriminant procedure was used to determine which words or phrases could significantly differentiate between Group 1 and Group 2 companies (for both samples). The results indicated that "[t]he president's letter to stockholders provides valuable, assessable, but often overlooked information. Our results suggest that such information can be used to discriminate between stocks that will perform well and those that will perform poorly" (p. 73).

In a US study, Kohut and Segars (1992) compared the President's letter of 25 'high performers' with 25 'low performers'. Using both syntactic and thematic content analysis, they tested whether the President's letters of 'high performers' and 'low performers' could be differentiated in terms of technical characteristics such as word count, number of sentences, syllables per word, themes within the letters and the time frame of themes. The syntactic dimensions of this study were reviewed in section 3.4.1 above. In relation to the analysis of thematic content, the most significant finding of the study was "the ability to correctly classify firms based on themes emphasised in their respective presidents' letters. These results confirm that, within annual reports, consistent communication strategies are being followed, based on favourable or

unfavourable company performance" (p. 17). Other results indicated an overall predominant emphasis on the past by both 'high performers' and 'low performers'. These findings are corroborated to some extent in the attribution study by Staw *et al.*, (1983) (section 3.5 above), where negativity was associated more with a past orientation than with future orientation. It should be borne in mind, however, that Staw *et al.*'s analysis was limited only to those statements which attributed blame or used causal reasoning and further, that the analysis looked at negative events as a whole and did not distinguish between 'high performers' and 'low performers'. Interestingly, in terms of what forward-oriented information was provided, 'low performers' exhibited a higher number of future references, when compared to 'high performers' (p. 18). It may be that emphasising future performance is a strategy employed by managements to lessen the focus on past or current poor performance.

In an experimental study, Smith (1998) investigated differences in the Chairman's statement between 'good performers' and 'poor performers'. Outcomes of the experiment are consistent with subjects being swayed by unduly optimistic narratives for 'poor performers' and by unduly pessimistic narratives for 'good performers'. While the content of the narrative can be used to discriminate between 'good performers' and 'poor performers', the messages conveyed are misleading. In particular, Smith argues that the over optimistic tone exhibited by 'poor performers' is cause for sufficient concern to suggest that narrative statements should be audited to eliminate, or at least reduce, the misleading messages they convey (p. 43).

Ober *et al.* (1999) investigated the use of certainty in Management's discussion and analysis in US corporate reports. Using a text-analysis software programme, the researchers investigated the differential use of linguistic certainty expression in the narratives of 'good performers' and 'poor performers' (measured by extent of profit increase / decrease). The sample consisted of six 'good performers' and six 'poor performers' across six industries (giving a total sample of thirty-six 'good' and 'poor performers' respectively). The study also investigated, for a much larger text corpus, the differential use of certainty expression across industry types and between a company's oral and written discourse.

No significant differences were observed in the use of certainty for 'good performers' and 'poor performers'. On this basis, the researchers concluded that corporate managers are even-handed in the delivery of 'good news' and 'bad news' (Ober *et al.*, 1999, p.

292). These findings appear to run counter to the body of evidence that managements will adopt a self-serving strategy in their accounting narratives. It may be, however, that the use of certainty is in itself a self-serving strategy for the release of bad news. A similar pattern was observed for the industry factor, with no significant differences in the use of certainty. Interestingly, however, a significantly higher score for certainty in oral discourse was observed for the sample as a whole, when compared with written disclosures. Ober *et al.* attribute this to anthropological and cultural factors (p. 292). It may be, however, that the differences relate to the regulated nature of the written discourse when compared to the unregulated oral discourse. This study is discussed further in section 4.3 along with those of Thomas (1997) and Hyland (1998a) (reviewed in section 3.4.2 above).

A number of studies have focused on the particular task domain that is the 'failed' / 'non-failed' decision environment (e.g. Tennyson *et al.*, 1990; Smith and Taffler, 1995; 2000). Tennyson *et al.* (1990) compared the President's letters and Managements' analysis of 23 US firms declaring bankruptcy with 23 non-bankrupt firms, matched for industry and size. Using a computerized content analysis programme that identified thematic constructs within the narrative data and assigned scores to each firm, quantifying the importance of each theme for each firm, they searched for systematic differences between the information content of narrative disclosures of firms approaching bankruptcy and firms that were not. Secondly, they searched for systematic differences between the information content of Management analysis and President's letter disclosures in explaining bankruptcy. Finally, the incremental information content of narrative disclosures was considered, such that the explanatory ability of financial statement data may be improved, if considered in relation to narrative disclosures. Overall, the results indicated a relationship between narrative disclosures and financial distress, with specific themes identified as useful in explaining bankruptcy (p. 405). In terms of the comparison between the Management analysis and the President's letter, the latter was found to have the greater, though not significant, explanatory ability (p. 405). Results indicated that both the President's letter and the Management analysis contain useful information for explaining impending bankruptcy, that is incremental to the financial data (p. 404).

Smith and Taffler (1995) employed an experimental approach, and used decision-makers as judges to determine how effectively they made the 'failed' / 'non-failed' decision based on the Chairman's statement alone, the quantitative financial statement

alone or on integrated resources (Smith and Taffler, 1995, pp. 1196-1197). The experimental research instrument was based on the Chairman's statements of 33 UK failed firms and 33 non-failed firms, matched for industry and size. Results indicated that, while the Chairman's statement alone is a significant indicator of financial performance and status, it is inferior to that of the quantitative financial statements (p. 1204). In terms of decisions resulting from integrated resources, results showed that the narrative information had a negative impact on the quality of decisions. "In many instances the message communicated by the narrative statement fails to confirm that of the quantitative financial statements, frequently by adopting an unduly optimistic tone likely to mislead the user of such statements. In the case of clearly failed companies we might surmise that such messages constitute deliberate obfuscation" (p. 1204).

Smith and Taffler (2000) used the same data sets of failed and non-failed firms' Chairman's statements as those upon which the experimental research instrument in their 1995 study was based. The orientation of the later study, however, was the generation and comparison of alternative statistical models. Further, the computerised content analysis methodology employed in this later study claimed to address a number of the limitations of methods employed in earlier studies. The results of the study showed that the firm's discretionary narrative disclosures have information content for the assessment of firm survival. "The chairman's statement alone is able to classify firms as subsequently bankrupt or non-failed with a very high degree of accuracy" (Smith and Taffler, 2000, p. 637). In addition to information content for the assessment of firm survival, results indicated that the firm's discretionary narrative disclosures have decision usefulness. The presence of non-financial statement information significantly improved the classificatory power of a model that relied on financial statement information alone (p. 635). The 'failed' / 'non-failed' decision environment was also investigated by D'Aveni and MacMillan (1990) (reviewed in detail in section 3.5 above).

3.6.3 Social and environmental disclosures

The voluntary and discretionary nature of social and environmental disclosures make this area a potentially rich source for investigating impression management in accounting narratives. In particular, interesting insights can be gleaned in respect of managements' motivations. It is not surprising, therefore, that a number of studies within the social and environmental disclosure literature have investigated impression management either as a main focus or a tangential focus. It is for these reasons that this

sub-set of the social and environmental literature is considered as a separate category in this literature review. The scope of the review will be limited to a particular site of disclosure, namely accounting narratives. Further, the review does not claim to be comprehensive of the entire literature corpus, but rather selective to illustrate the main issues. Finally, a number of the studies reviewed do not separately report an analysis of environmental disclosures in terms of their location within the corporate annual report. All of the studies clearly state, however, that their coverage is inclusive of environmental disclosures in accounting narratives.

Wiseman (1982) examined environmental disclosures in the corporate annual reports of 26 US firms drawn from environmentally sensitive industries. An indexing procedure was used to measure the extent of disclosure. The resulting index measurements were then compared to actual environmental performance measures. "[F]indings indicated that the voluntary environmental disclosures were incomplete, providing inadequate disclosure for most of the environmental performance items included in the index. Further, it was demonstrated that no relationship existed between the measured contents of the firms' environmental disclosures and the firms' environmental performance" (p. 62).

Two studies by Guthrie and Parker (1989; 1990) also provide evidence that managements' corporate social disclosure practices are self-serving. The earlier study was a longitudinal historical analysis of social disclosures of 100 years of annual reporting by a dominant Australian company, engaged in environmentally sensitive activities. Overall, findings indicate that corporate social disclosure is a proactive process of information provided from management's perspective, where reporting is motivated primarily by self-interest (Guthrie and Parker, 1989, p. 351).

Guthrie and Parker (1990) investigated corporate social disclosure practices for the 50 largest listed companies in Australia, the United Kingdom and the United States. The study focused on corporate annual reports for accounting period ending in 1983. Overall, the evidence was indicative of self-serving patterns of disclosure, articulated by the researchers in terms of political economy of accounting theory, a perspective which "recognizes the communicators' tendency to still strive to set the agenda and to portray the social, political and economic world on their own terms" (p. 173).

Gray *et al.* (1995) is a multi-firm longitudinal study of UK environmental and social disclosure practices, covering a 13 year period up to an including 1991. Amongst their observations, the researchers find inconsistent disclosure (p. 49), poor quality disclosure (p. 71) and unreliable disclosure (pp. 65-66).

Deegan and Gordon (1996) surveyed environmental disclosure practices of Australian companies. A central focus of this study was to consider the objectivity of disclosure practices and, in particular, whether narrative disclosures relating to the environment are self-laudatory (p. 189). The 1991 corporate annual reports were analysed for 197 firms. The results provided "strong support for the contention that firms will disclose 'positive' news, but will suppress 'negative' news" (p. 190). The study also investigated disclosure practices over time, and whether environmental disclosures may be related to concern held by environmental groups about particular industries' environmental performance. Taken together, the results indicate that management is less than objective in its environmental disclosure practices, particularly as the environmental sensitivity of the industry increases, that is, as the sensitivity increases, the firms produce relatively more positive news (p. 198).

Deegan and Rankin (1996) investigated the environmental disclosures in the corporate annual reports of Australian companies that were subject to successful prosecution from the Environmental Protection Authority during the period 1990-1993. The objective of the study, then, was to investigate "the environmental reporting practices of firms which are known, *ex ante*, to have bad news available to report" (p. 51). The results were consistent with the results of previous studies, that, "in the absence of disclosure regulations pertaining to environmental issues…Australian companies will only provide environmental information which is favourable to their corporate image" (p. 62). Interestingly, the study also found "a significant increase in the reporting of favourable environmental information surrounding environmental prosecution" (p. 62).

Gallhofer *et al.* (1996) surveyed environmental disclosures in the 1992/93 corporate annual reports of the top 50 companies in the UK (measured by reported accounting profit). The survey found little evidence of the more substantive, non self-congratulatory disclosures called for in prior research (in particular, Gray *et al.*, 1993). Other observations were that companies do not submit to exacting standards of accountability (Gallhofer *et al.* 1996, p. 77), that environmental disclosures are vague (p. 77) and in common with the great bulk of previous empirical work "can scarcely be

relied upon in the current regulatory environment to discharge genuine environmental accountability" (p. 79).

Kent *et al.* (1997) investigated social responsibility and environmental disclosures in Australian chemical companies, an industry particularly prone to environmental issues. Again, in common with the prior literature, disclosures were found to be *ad hoc*, unsystematic, subjective and predominantly self-laudatory.

Deegan and Rankin (1997) synthesised the extant environmental disclosure literature relating to Australian companies (in particular, Guthrie and Parker, 1989; 1990; Deegan and Gordon, 1996; Deegan and Rankin, 1996). They allude to an overwhelming criticism which has emerged from the literature that reporting practices are biased, self-laudatory and with minimal disclosure of negative information (Deegan and Rankin, 1997, p. 562). Typically, these results are explained in the context of a legitimacy theory, whereby companies, through the disclosure practices, are motivated to achieve strategic goals in terms of shaping community perceptions (p. 579). The primary motivation of the study, however, aside from this contextualisation, was to investigate the materiality of environmental information to users of annual reports. This has been assumed in prior research. Through a series of questionnaires to multiple user groups, the significant finding of the study was that the "annual report was perceived by the total group of respondents to be significantly more important that any other source of information concerning an organization's interaction with the environment" (p. 580).

Neu *et al.* (1998) reviewed the environmental disclosures of Canadian public companies operating in the mineral extraction, forestry, oil and gas and chemical industries over the 1982 to 1991 period. The particular focus of the study was to question whether such disclosures highlight positive environmental actions, obfuscate negative environmental effects, or both (p. 265). While the focus of analysis encompassed disclosures throughout the corporate report and indeed, beyond the corporate report, the study sought to determine which particular sites, or discourses, management might be predisposed to utilise in managing public impressions. Narrative disclosures in the corporate report were found to be the preferred mechanism for managing public impressions, where their proximity to the audited financial statements lends them some credibility not afforded to other forms of organisational communication such as advertising (p. 279). Finally, a number of recurring impression management strategies

employed by management in their corporate report narratives were identified, namely acquiescence, compromise and defiance (p. 279).

In an experimental study, Milne and Chan (1999) investigated the usefulness of narrative corporate social disclosures from corporate annual reports for decision-making. The particular user group, whose responses were elicited in the study, was classified as 'sophisticated' (accountants and investment analysts). "The overall findings suggest investor surrogates drawn from the accounting and finance professions largely ignore narrative social disclosures for their investment decision making" (p. 452). The results in this study are in contrast to a number of prior decision-experiment studies of corporate social disclosures (e.g. Acland, 1976; Schwan, 1976 and Hendricks, 1976). These studies, concerned in the main with quantified social disclosure information incorporated in the audited financial statements, found that such information provided a basis to assess risk and return and elicited decision reactions. By contrast, the narrative disclosures investigated by Milne and Chan (1999) were not incorporated in the decision-making process.

3.6.4 Synthesis of category 3: Studies investigating thematic content

This section has reviewed those studies that have investigated impression management in accounting narratives with a particular focus on thematic content. Studies have been reviewed under three heads: those investigating the association between narrative disclosures and financial performance (section 3.6.1), differences between 'good performers' and 'poor performers' (section 3.6.2) and studies whose particular focus is social and environmental disclosures (section 3.6.3).

Studies investing the association between narrative disclosures and financial performance find empirical evidence of association, both for current and future financial performance. These findings are balanced, however, with evidence that managements engage in impression management tactics in pursuit of a self-enhancing reporting bias in favour of 'good news'.

A number of the studies investigating the narratives of 'good performers' compared with 'poor performers' observe differential reporting practices. Once again, however, these conclusions must be qualified with evidence from a number of studies that the narratives of 'poor performers' provide signals that imitate 'good performers'. Also, there is some variation in terms of differentiation, depending on which particular

characteristic or textual dimension of the narrative is the focus of attention. Rather than seeing this variation as inconsistent and contradictory, it may rather be indicative of a sophistication on the part of managements in their awareness and exploitation of a multiplicity of linguistic dimensions in their pursuit of a self-serving strategy in their narrative disclosures.

The studies, whose particular focus is social and environmental disclosures, when taken together, provide a consistent body of evidence that managements' discretionary social and environmental narrative disclosures are constructed in a self-serving manner.

3.7 Overall synthesis of empirical evidence

In attempting to synthesise the empirical evidence as a whole, the discussion here will reflect on two distinct perspectives that emerge from the literature review. The first concerns the empirical evidence, and the second, the overall allocation of attention in the literature.

Turning first to the empirical evidence, taking the literature as a whole, it is reasonable to conclude that managements engage in impression management tactics in their discretionary narrative disclosures. In the introduction to this chapter, three generic themes were identified as emerging from the literature. While not the primary focus for the categorisation that has been reflected in the structure of this literature review, they will serve as a useful focus for synthesising the empirical evidence. The three themes identified were overall valence of news, attribution of news and differentiation between 'good performers' and 'poor performers'.

In terms of the overall valence of news, the empirical evidence, when taken together, points to a tendency on the part of management to emphasise 'good news' and downplay 'bad news'. This tendency towards impression management is evident, in particular, in those studies reviewed in sections 3.6.1 and 3.6.3.

There is also evidence of reporting bias in relation to the attribution of news, with a tendency on the part of management to distance themselves from 'bad news', by attributing it to external factors, while taking credit for 'good news' (see, in particular, section 3.5).

The third theme to emerge from the literature might be considered the dominant theme, the investigation of differentiation between 'good performers' and 'poor performers'.

This theme finds its focus in a central question that characterises much of the impression management literature, that is, whether the accounting narratives of 'good performers' and 'poor performers' are systematically different. While this question was explicitly reflected in the title of one of the subcategories of studies investigating thematic content (section 3.6.2), as a research question is it prevalent throughout the literature. For example, a number of the studies investigating syntactic structure (section 3.4) and patterns of causal reasoning and attribution (section 3.5) address this question. Depending on the particular textual dimension that is the focus of attention, evidence for impression management can be indicated both by the prevalence and absence of differentiation. For example, there is some evidence for the prevalence of obfuscation as a factor that differentiates 'good performers' and 'poor performers' (section 3.4). Equally, the absence of differentiation in patterns of causal attribution (section 3.5) and in thematic content (section 3.6.2) can be indicative of impression management.

Setting this empirical evidence in its wider context, the overall conclusions that emerge from the investigation of impression management in accounting narratives are consistent with the investigations of graphical and visual disclosures in corporate reports (section 3.2).

There is an urgent need for further empirical research into accounting narratives to determine the extent of impression management and to amass a body of empirical evidence that will influence the agendas of accounting and auditing policy-makers. In order to investigate impression management in accounting narratives, however, the researcher is dependent on the available methods and approaches.

Turning secondly to the overall allocation of attention in the literature, a number of issues emerge from the review. Three are of particular relevance to the discussion here. The first concerns the overall allocation of the literature in terms of the particular textual characteristic or dimension investigated, the second, allocation in terms of the narratives investigated, and the third, allocation in relation to the country or accounting jurisdiction investigated. Each is considered briefly in turn.

By categorising studies in this review in relation to the particular textual characteristic or dimension that is their main focus of attention, issues relating to the overall balance of the literature emerge. Taking the literature as a whole, as a textual dimension, the

analysis of syntactic structure has received relatively little attention in the accounting literature. This lends further support to the findings in chapter 2 (section 2.6). There is a pressing need for the accounting researcher investigating impression management to embrace more fully the syntactic dimension. Methodological limitations have hitherto limited the accounting researcher in this regard.

The overall allocation of the literature in terms of the accounting narratives investigated is weighted heavily towards the Chairman's statement or its US equivalent, the President's letter. There are sound reasons for this. Given that the Chairman's statement has endured as the most widely read section of the annual report (see e.g., Courtis, 1982; Parker, 1982; Jones, 1988; Harte *et al.,* 1991; Epstein and Pava, 1993; Subramanian *et al.,* 1993; Bartlett and Chandler; 1997; Courtis, 1998; Smith and Taffler, 2000), it might be surmised that management will give special attention to that section, thereby making it a fertile narrative in which to investigate impression management (Courtis, 1998, p. 462). The Chairman's statement will remain an important focus for accounting researchers investigating impression management. The dominance of the Chairman's statement can also be attributed in part to the fact that narratives such as the OFR are *relatively* recent innovations. That said, given that it was introduced in 1993, the fact that it has received relatively little attention in the literature is surprising. Section 3.6.1.1 identified the small number of empirical studies that have focused on the OFR. Of these, only the study by Schleicher and Walker (1999) (reviewed in section 3.6.1.2) was directly concerned with the investigation of impression management. Given the increasing importance of narratives such as the OFR (see here the discussion in section 1.4 and relevant subsections), there is an urgent need for accounting researchers to probe deeper into such discretionary narrative disclosures. The need for engagement is further emphasised by a number of studies in the professional literature which suggest that managements might engage in impression management strategies in narratives such as the OFR (e.g. Jones, 1996a; Sydserff, 1998).

Finally, in terms of the overall allocation of the literature, relatively few studies have focused on the UK context. This is particularly evident in relation to studies investigating syntactic structure (section 3.4) and studies investigating patterns of causal reasoning and attribution (section 3.5). Of the studies investigating syntactic structure, only Jones (1988), Smith and Taffler (1992b) and Clatworthy and Jones (2001) investigate narratives in UK corporate reports. None of the published attribution studies

focuses on UK corporate reports. The need for further research in a UK context is particularly pressing given the current debates about the future role of discretionary narrative disclosures such as the OFR (see, in particular, sections 1.4.1 and 1.4.3).

3.8 Specific requirements of accounting researchers investigating impression management

Consistent with the intention to develop methods with a view to investigating impression management, it is necessary to take account of the specific requirements of accounting researchers in such investigative studies. These requirements, in terms of research designs and measurement models, will serve as a referent for the methods developed in this study. These requirements augment the more general methodological assessment criteria identified in section 2.4.

While the structuring of the review in this chapter was driven by the particular textual characteristic or dimension that was the primary focus of attention in the studies reviewed (for justification see section 3.3), it was noted in section 3.3 that studies might also have been categorised in terms of research design. An overarching theme in the literature reviewed, irrespective of the particular characteristic or textual dimension of the narrative that is the focus of attention, is a focus on the relationship between narrative disclosures and financial performance. Two approaches, characterised in terms of research questions and research design, are commonly used to investigate this relationship. These approaches might be termed tests of association and tests of differentiation. While there are obvious similarities between the approaches, their emphasis, particularly in terms of research design, is different.

A number of studies use tests of association to relate different dimensions of narrative disclosure to current and future financial performance. In particular, tests of association are common in studies investigating syntactic structure (section 3.4) and studies investigating the association between narrative disclosures and financial performance (section 3.6.1 (categorised under 'thematic content')). A generic research question in tests of association might be stated as follows. Is there an association between narrative disclosures and current and future financial performance? The research designs that characterise this approach typically employ some form of statistical correlation testing.

A number of studies use tests of differentiation to search for differences in the narrative disclosures of 'good performers' and 'poor performers' (also referred to as 'good news'

/ 'bad news' companies). Tests of differentiation are common throughout the literature (sections 3.4, 3.5 and 3.6.2). A generic research question in tests of differentiation might be stated as follows. Are the narratives of 'good performers' and 'poor performers' systematically different? In terms of research design, samples typically comprise matched sets of 'good performers' and 'poor performers', determined on the basis of some performance criterion. Statistical tests of differentiation, typically t-tests or the non-parametric equivalent are used in these studies. Of the two research designs identified, the second, tests of differentiation has emerged in the literature as the dominant model.

The inputs to both tests of association and tests of differentiation are reliable dependant variables that can be used in some form of statistical modelling. Accordingly, it is important that the methods developed in this study give rise to such dependant variables.

3.9 Additional research questions arising from review of impression management literature

Table 3.2 details five research questions arising from the literature review presented in this chapter.

Table 3.2
Additional research questions arising from review of impression management literature

Primary research questions [correspond to primary research objective]	
1.	Are there text-focused methods of evaluation that can redress the lack of emphasis on the syntactic dimension, exhibited in the existing portfolio of approaches?
2.	Do the text-focused methods developed in this study give rise to dependent variables, which can be used as inputs to tests of association and tests of differentiation?
3.	Are the methods developed in this study capable of being used in empirical applications investigating impression management?
Secondary research questions [corresponds to secondary research objectives]	
4.	Are the corporate annual report narratives (Chairman's statement and Manager's report) of 'good performing' and 'poor performing' UK investment trust companies systematically different?
5.	Are the Chairman's statement and Manager's report of UK investment trust companies systematically different?

The first three questions are developed in order to pursue the primary research objective of the study (see Table 1.1 and section 1.2.2.1). Question 1 is a repetition of primary research question 1 arising from the methodological critique in the previous chapter (section 2.7). The lack of emphasis on the syntactic dimension in the empirical studies emphasises the findings in chapter 2. Question 2 relates to the specific requirements of accounting researchers investigating impression management (section 3.8). These requirements will serve as a referent for the development of methods. Question 3 is

based on the premise that, if the methods developed are to be used by accounting researchers in future empirical research, their aptitude in this regard must be demonstrated through an illustrative empirical application.

Questions 4 and 5 are developed in order to pursue the secondary research objectives of the study (see Table 1.1 and section 1.2.2.2). Question 4 reflects what is arguably the dominant question investigated by accounting researchers investigating impression management. The question also embraces the need to investigate narratives beyond the Chairman's statement and in a UK context. Specific reference is made here to the Chairman's statement and Manager's report of UK investment trust companies as the particular focus of attention in this study. The rationale for this particular focus is discussed in section 4.6. The embracing of narratives beyond the Chairman's statement invites the investigation of differentiation between different accounting narratives. This is reflected in question 5.

3.10 Summary and conclusions

This chapter has reviewed the empirical literature investigating impression management in accounting narratives in corporate reports. In the introduction to the chapter (section 3.1) a two-fold purpose was identified, first relating to the methodological contribution of the study and second, to the empirical contribution. In terms of the methodological contribution, the review has identified the particular requirements, in terms of research designs and measurement models, of accounting researchers investigating impression management. In addition, the review highlights the lack of emphasis on the syntactic dimension. Taken together, these insights have been developed into specific research questions, which augment the primary research questions developed in chapter 2.

In relation to the empirical contribution, the review not only provides an overall synthesis of the impression management literature in relation to accounting narratives in corporate reports, but also identifies, through reflection on the overall allocation of attention of the literature, gaps that might potentially be exploited. In particular, a lack of emphasis on narratives beyond the Chairman's statement and on UK narratives was identified. Both of these issues will be embraced in the empirical application reported in chapter 7 (see also here, sections 4.8 and 4.8.1).

Finally, the literature review presented in this chapter is offered as a specific research contribution in its own right. To date, as far as the author is aware, there has been no comprehensive review of this nature published in the literature.

CHAPTER 4

DEVELOPING TEXT-FOCUSED METHODS

4.1 Introduction and overview of chapter

This chapter functions as a bridge between the literature reviews in chapters 2 and 3 and the detailed development chapters 5 and 6. The structure of the chapter is as follows. Section 4.2 synthesises the research questions developed in chapters 2 and 3. An additional research question is added, acknowledging recent developments in the managerial business communications literature. These developments are reviewed in section 4.3. Section 4.4 outlines the methods that will be developed in this study, along with some commentary by way of justification. Section 4.5 discusses how the methods developed in this study go some way towards redressing the lack of emphasis on the syntactic dimension, exhibited in the existing portfolio of approaches. Section 4.6 identifies and reflects on the lines of development evidenced through the methods developed in this study. Two lines of development are identified: first, developing methods from the applied linguistics literature, of which the texture index is an example, and second, developing methods from the managerial business communications literature, of which the transitivity index and *DICTION* analysis are examples. Sections 4.7 and 4.8 deal respectively with the research design and research questions (section 4.7) and data (section 4.8) used in the illustrative empirical application reported in chapter 7. The research design and research questions are those identified in section 3.8. The intention is to develop methods in the context of the specific requirements of accounting researchers investigating impression management. A brief discussion at this point is necessary as a referent for the detailed development chapters 5 and 6. The overview of the data used in the illustrative empirical application is included here for two reasons. First, the methods are illustrated in chapters 5 and 6 using this data. Second, the methods, the texture index in particular, are developed with regard to the particular characteristics of the accounting narrative under investigation. Section 4.9 summarises and concludes.

4.2 Overall synthesis of research questions

The literature reviews in chapters 2 and 3 gave rise to seven research questions. Three are developed from the methodological critique in chapter 2 (reported in section 2.7 and Table 2.2). Five are developed from the review of the empirical impression

management literature in chapter 3 (reported in section 3.9 and Table 3.2). One research question emerged from both reviews, giving an overall total of seven. These questions are brought together in Table 4.1. An additional question is added here (number 1.3 in Table 4.1) in pursuit of the primary research objective (section 1.2.2.1 and Table 1.1). The rationale for including this additional research question is discussed in detail in section 4.3. The inclusion of this question as number 1.3 alters slightly the sequencing that would have emerged from the amalgamation of Tables 2.2 and 3.2. The rationale for this adjustment is so as to reflect the sequence in which the research questions are addressed throughout the remainder of the study. For purposes of identification, the origin of the particular research question is noted.

Table 4.1
Overall synthesis of research questions

Source	No.	**Primary research questions** [correspond to primary research objective]
Table 2.2 Table 3.2	**1.1**	Are there text-focused methods of evaluation that can redress the lack of emphasis on the syntactic dimension, exhibited in the existing portfolio of approaches?
Table 2.2	**1.2**	Is there a defensible, reliable, representative measure of readability which takes account of variability that can be offered as an alternative to readability formulas?
Section 4.3	**1.3**	Are there text-focused methods in the managerial business communications literature, which can be identified as offering potential for the accounting researcher investigating impression management?
Table 2.2	**1.4**	Do the text-focused methods developed in this study satisfy the recognised assessment criteria for methodological development?
Table 3.2	**1.5**	Do the text-focused methods developed in this study give rise to dependent variables, which can be used as inputs to tests of association and tests of differentiation?
Table 3.2	**1.6**	Are the methods developed in this study capable of being used in empirical applications investigating impression management?

Source	No.	Secondary research questions [correspond to secondary research objectives]
Table 3.2	**2.1**	Are the corporate annual report narratives (Chairman's statement and Manager's report) of 'good performing' and 'poor performing' UK investment trust companies systematically different?
Table 3.2	**2.2**	Are the Chairman's statement and Manager's report of UK investment trust companies systematically different?

4.3 Recent developments in the managerial business communications literature

The inclusion of research question 1.3 (Table 4.1) reflects a recent trend in the managerial business communications literature towards the development of methods for use in text analysis. The literature reviews in chapters 2 and 3 included a number of studies drawn from the managerial business communications literature, in particular *The Journal of Business Communication* (e.g. Hildebrandt and Snyder, 1981; Kohut and Segars, 1992; Subramanian *et al.,* 1993; Jones, 1994; Thomas, 1997; Hyland, 1998a; Ober *et al.,* 1999). Three of the more recent studies, Thomas (1997), Hyland (1998a) and Ober *et al.* (1999) describe methods of text evaluation, which offer potential to the accounting researcher investigating impression management. Each of these studies applied, in a preliminary way, the particular approach in an accounting related application. While the orientation of these studies is such that they fall within the compass of the impression management literature, hence their inclusion in chapter 3 (see section 3.4.2 for Thomas (1997) and Hyland (1998a) and section 3.6.2 for Ober *et al.* (1999)), they were not included in the overview and critique of existing methods in chapter 2. The studies are written from an applied linguistics / managerial perspective, rather than an accounting perspective. In accordance with the literature categorisation in section 1.3, these studies are not classified as 'accounting literature'. This is not merely semantic labelling but rather reflects, to a greater or lesser degree depending on the particular method under consideration, that some further development would be required to meet the specific requirements of accounting researchers described in sections 2.4 and 3.8.

All three approaches have a sound basis in linguistics. Although the approaches draw on different areas of theoretical linguistics, they share a common framework in terms of

what linguists refer to as a systemic approach to language study (see e.g., Halliday, 1976; 1978; 1985; Lemke, 1989; Fawcett and Halliday, 1978; Butler, 1985). Broadly, this approach is concerned with evaluating linguistic structures and, in particular, how these structures are exploited in strategic narrative construction. The systemic approach can be regarded as a particular dimension of applied linguistics. The development of linguistic theory into usable methods for analysis, methods which can be used by the wider social scientific research community, is a relatively recent phenomenon. Historically, linguistics was dominated by a formalist approach and had little regard for integrating linguistic analysis into interdisciplinary frameworks. Recent developments in the discipline have facilitated a movement away from this formalist approach to a concern with developing relevant interdisciplinary models of language, frameworks which turn the insights of linguists into comprehensible and usable forms (Fairclough, 1995, p. 210). These developments are associated predominantly with the emerging discipline of applied linguistics or applied discourse analysis. This trend has been reflected in other areas of the accounting literature. In a ground-breaking paper, Llewellyn (1999) argues the case for developing narrative methodologies in accounting and management research. Gallhofer *et al.* (2001) develop such a methodology for accounting in an application of critical discourse analysis to investigate struggles over takeovers legislation in New Zealand. They argue for the general applicability of such analysis in the area of financial and accounting regulation.

The three methods identified here (Thomas, 1997; Hyland 1998a and Ober *et al.*, 1999) as offering potential to the accounting researcher are all taken from *The Journal of Business Communication.* The focus on this particular journal recognises that its objectives and scope are of particular relevance to researchers concerned with communication in accounting. Indeed, it can be argued that this journal has emerged as an interface between the accounting literature and the managerial literature (section 1.3). In focusing on this particular journal, it is not claimed that this is the only business communications source that is relevant to accounting researchers. Further, it is not claimed that the methods identified here are the only methods that might potentially be exploited. Rather, these methods are, in the opinion of this author, of particular relevance both in terms of their potential for adaptability to meet the requirements of accounting researchers, and in terms of their complementarity with existing methods.

The methods of analysis used by Thomas (1997), Hyland (1998a) and Ober *et al.* (1999) are discussed in sections 4.3.1 to 4.3.3. For each of the methods, its scope in terms of syntactic analysis or thematic analysis (or both) is identified.

4.3.1 Analysis of transitivity, thematic structure, context, cohesion and condensations

Thomas (1997) investigated linguistic structure in a series of President's letters to shareholders for a particular company over a five-year period (reviewed in section 3.4.2). Five aspects of linguistic structure were investigated: transitivity (verb structure), thematic structure, context, cohesion and condensations. There are two dimensions to transitivity or verb structure: the type of verb that is used and the form of the verb. Material verbs and relational verbs are examples of verb types. Material verbs are verbs of doing, conveying a meaning associated with movement and action. Relational verbs are verbs of attribution or identification. The second dimension to transitivity, verb form, is concerned with verbal voice, that is whether the verb is in the active or the passive voice. Thematic structure is concerned with the particular part of the clause, which functions as the subject or agent. In particular, Thomas investigated how different types of subject can personalise or depersonalise a message. Context, cohesion and condensation refer to those aspects of text structure that function throughout a text as linking devices.

The orientation of Thomas' approach is towards syntactic analysis, apart from the first dimension of transitivity or verb structure, namely the type of verb that is used. The analysis of verb-type can be considered as form-oriented content analysis.

Thomas' paper is written from an applied linguistics / managerial perspective, rather than an accounting perspective. The approach outlined is theoretical and discursive in nature. In particular, Thomas' approach contains no detailed rules for application. To be of use to accounting researchers in empirical studies, a more comprehensive measurement model would be required for a number of the dimensions described. For example, the existing measurement model for the textual linking devices (context, cohesion and condensation) is based only on an overall observation of the text.

4.3.2 Metadiscourse analysis

Hyland (1998a) investigated linguistic structure in the Chairman's letter and Directors' report of Hong Kong companies (reviewed in section 3.4.2). The aspect of linguistic

structure investigated was metadiscourse, a term which he takes to refer to those aspects of linguistic structure which are employed in strategic narrative construction. Metadiscourse is a critical element of persuasive discourse as it seeks to influence how readers understand propositional information (pp. 225-226). There are two dimensions to metadiscourse: textual metadiscourse and interpersonal metadiscourse. Textual metadiscourse can be categorised as syntactic analysis, interpersonal metadiscourse as form-oriented content analysis.

Textual metadiscourse is concerned with the construction of the text through the use of linking devices, essential to the readability of the text (p. 228). Five categories of textual metadiscourse are identified: first, logical connectives, which express semantic relations between clauses (e.g. in addition, but, therefore); second, sequencers, which denote sequences of text material (e.g. first, next, finally, then); third, frame markers, which explicitly refer to significant stages or movements in the text (e.g. finally, to repeat, my goal is); fourth, endorphic markers, which refer to information in other parts of the text (e.g. noted above, see below); and fifth, code glosses, which help readers grasp meanings of material previously stated (e.g. namely, for example / e.g., in other words).

The second dimension of metadiscourse, Hyland refers to as interpersonal metadiscourse. In contrast to textual metadiscourse, which is concerned more with the surface form of the text, interpersonal metadiscourse is concerned with the tenor of the discourse. There are five sub-categories, each of which is represented by a taxonomy of markers. The first is hedging, signalled by markers such as 'possible', 'might', 'perhaps'. A writer might use hedging if they were tentative about the message they wished to convey. By contrast, emphatic markers are used by the writer to indicate assurance regarding a particular proposition. Examples of emphatic markers given by Hyland in his description are 'it is obvious', 'definitely' and 'clearly'. The third category, attributions, indicates the source of information e.g. 'according to', 'X says'. Fourthly, attitude markers express the authors attitude to textual information e.g. 'surprisingly', 'hopefully'. The final sub-category, relational markers, are used to involve the reader in the text. Included in the taxonomy of relational markers are collective pronouns, imperatives and questions. Interestingly, there is a considerable degree of overlap between the categories of interpersonal metadiscourse and the semantic variables investigated using *DICTION* analysis (section 4.3.3 below).

Hyland's paper is similar to Thomas in that it is written from an applied linguistics / managerial perspective. Hyland is Professor of English at City University, Hong Kong. It is one of a series of studies investigating the use of metadiscourse in a variety of discourse genres, including scientific research articles (Hyland, 1996a, b), academic writing (Hyland, 1998b, 2000) and textbooks (Hyland, 1999). Metadiscourse levels are measured on the basis of an inventory of over 250 metadiscoursal markers. The range and frequency of occurrence of these markers was analysed with Microconcord. Microconcord is a Windows-based text-processing program which allows users to compile general text statistics, wordlists, and concordances.

A particular weakness of Hyland's (1998a) paper is the discussion of results. The study finds a higher level of metadiscourse marking in the Chairman's statement compared to the Directors' report, indicative of strategic manipulation of the Chairman's statement. This conclusion is based on what he considers "considerable differences…between the two genres", where the Chairman's statement contains "about two and a half times more metadiscourse per 100 words and…six times more interpersonal metadiscourse" (pp. 230-1). The actual data on which these proportionate conclusions are based has 2.06 metadiscourse items per 100 words compared to 0.83 (two and a half times), with a comparison of .77 to .13 (six times) for interpersonal metadiscourse. On the basis of the actual observed data, one must caution any conclusions drawn. Moreover, there is no statistical analysis employed in the paper to justify the conclusions.

4.3.3 *DICTION* analysis

The third approach identified in the managerial literature as offering potential to the accounting researcher, is *DICTION* analysis. *DICTION* is a commercially available computerised content analysis software programme that examines a text for verbal tone. Verbal tone is measured in terms of five variables: 'certainty', 'optimism', 'activity', 'realism' and 'commonality'. As indicated above, these variables correspond closely to Hyland's interpersonal metadiscourse categories. *DICTION* can be categorised as form-oriented content analysis. Ober *et al.* (1999) used *DICTION* to investigate 'certainty' expression in Management's discussion and analysis in US corporate reports (reviewed in section 3.6.2). The research design compared the narratives of 'good performers' and 'poor performers'. While not written from an accounting perspective, the study is presented from a business communications perspective. Of the three methods identified as offering potential, *DICTION* is most directly oriented towards the requirements of accounting researchers investigating impression management. This is

due principally to the rigorous nature of the measurement model, which meets a number of the criteria discussed in sections 2.4 and 3.8. What is perhaps surprising is that the method has only been exploited to a limited extent in terms of accounting applications, with only the 'certainty' variable investigated.

Table 4.2 summarises the methods identified in the managerial business communications literature as offering potential to the accounting researcher investigating impression management.

Table 4.2
Methods offering potential in the managerial business communications literature

Thomas (1997)	**Hyland (1998a)** ***Metadiscourse analysis***	**Ober *et al.* (1999)** ***DICTION analysis***
Syntactic analysis: Transitivity: Verb form Thematic structure Context Cohesion Condensations	**Syntactic analysis:** Textual metadiscourse: Logical connectives Sequencers Frame markers Endorphic markers Code glosses	
Thematic analysis: *(form-oriented)* Transitivity: Verb type	**Thematic analysis:** *(form-oriented)* Interpersonal metadiscourse: Hedging Emphatic markers Attributions Attitude markers Relational markers	**Thematic analysis:** *(form-oriented)* *DICTION* analysis for expression of 'certainty'

4.4 Developing text-focused methods

Research questions 1.1 and 1.2 (Table 4.1) reflect the urgent need for development in relation to the syntactic dimension and, in particular, for an alternative to readability formulas. Of the approaches identified in the managerial business communications literature as offering potential (section 4.3 and Table 4.2), Thomas (1997) and Hyland (1998a) focus on the syntactic dimension. Clearly, the aspects of syntactic structure

embraced by these approaches represent a significant expansion in the scope or range of the syntactic dimension. That is to be welcomed and these insights embraced.

Turning to the question of an alternative to readability formulas, a number of the syntactic dimensions captured by these approaches embrace the whole-text aspects that readability formulas are unable to capture. This was highlighted in section 2.5.1 as a significant weakness in the face validity of readability formulas. Thomas' approach embraces context, cohesion and condensations as aspects of text structure that function throughout a text as linking devices. Hyland embraces the whole-text dimension through the five categories of textual metadiscourse: logical connectives, sequencers, frame markers, endorphic markers and code glosses. Differences in terminology between the two approaches do not indicate that the approaches embrace different whole-text dimensions. In keeping with the theoretical and discursive nature of Thomas' approach, the terminology is used in an abstract, conceptual sense. Hyland's textual metadiscourse markers can be seen as concrete realisations of Thomas' abstract concepts. For example, logical connectives are cohesive markers.

It is clear that these approaches address some of the issues of validity associated with readability formulas. Bearing in mind the problems associated with these approaches (sections 4.3.1 and 4.3.2), before developing these approaches for accounting applications as an alternative to readability formulas, the question must be asked, as to whether there is a more defensible, reliable, representative measure of readability than either of these approaches. Neither of these approaches is developed specifically as an alternative to readability formulas.

This study advocates the use of a texture index as an alternative to readability formulas. The texture index investigates narrative across a number of dimensions, referred to as indexicals. There are a number of reasons for selecting this approach. First, the approach is developed specifically in the applied linguistics literature as an alternative to readability formulas. Second, the approach is more comprehensive than either of the approaches discussed above, in its embracing of the whole-text aspects identified as a weakness of readability formulas. Third, it claims particular relevance to accounting applications. Fourth, the measurement model is oriented towards the requirements of accounting researchers investigating impression management. Fifth, and a particularly strong feature of the texture index, is its inherent adaptability, where the general model can be applied to the specific situation of the narrative under investigation. Sixth, in

addition to its dimensions of syntactic analysis, the approach embraces a meaning-oriented thematic content analysis. Seventh, and perhaps most importantly, the approach measures strongly against the framework of assessment criteria, achieving a balance between the necessity for objectivity to strengthen validity and reliability, yet embracing a sophisticated in-depth analysis.

Like the three approaches identified in the managerial literature as offering potential to the accounting research investigating impression management (section 4.3), the texture index falls within the scope of a systemic approach to language study. Given that the texture index is new to the accounting literature, it will be necessary to demonstrate that the method has a sound theoretical basis; in other words, to use the terminology for face validity, that the categories embraced by the texture index measure the constructs they purport to measure. The theoretical justification for the approach will draw not only the applied linguistics literature but also on the theoretical linguistic principles upon which the approach is based (see Table 4.4 below (section 4.6)).

Taking the approaches described by Thomas (1997) and Hyland (1998a) together, the potential for accounting researchers are in the insights offered in relation to the dimensions of strategic narrative construction not encompassed by the texture index. These are transitivity (verb structure) and thematic structure (Thomas) and interpersonal metadiscourse analysis (Hyland, 1998a). As already indicated, the linguistic dimension 'context', 'cohesion' and 'condensations' (Thomas) and textual metadiscourse (Hyland)) are developed more fully in the texture index.

It is important to note that exploiting particular dimensions of these approaches is not problematic. Neither approach claims inclusivity in terms of the dimensions captured. Thomas advocates no form of cross summation across the different dimensions. With Hyland's approach, textual and interpersonal metadiscourse can readily be treated as distinct categories, the former falling within the domain of syntactic analysis, the latter, within form-oriented content analysis.

Hyland's (1998a) method for analysing interpersonal metadiscourse analysis is not explored further in any detail in this study. There are two reasons for this. The first recognises that the principle orientation of this study is to develop and apply new text-focused methods of evaluation. Metadiscourse analysis is already at an advanced stage of development and has been used in an in-depth empirical accounting application. It is

discussed here as a relatively new approach and one which has, as yet, only been employed in the managerial business communications literature. A number of suggestions are made as a matter of further research as to how the method might be developed for accounting applications (section 8.5.1). The second reason relates to the fact that there is a considerable degree of overlap between the categories of interpersonal metadiscourse and the semantic variables investigated using *DICTION* analysis.

In terms of developing methods, the potential for a significant contribution is in relation to Thomas' investigation of transitivity and thematic structure. As already indicated, Thomas' approach is theoretical and discursive in nature and does not attempt to develop a systematic method of analysis. This study exploits the potential in Thomas' approach and develops a systematic method of analysis in relation to the second dimension of transitivity - verb form. The method developed is a transitivity index. A justification for focusing on this particular dimension is included in section 6.3.1 as part of the detailed development chapter. The potential for developing methods in relation to verb choice (the first dimension of transitivity) and thematic structure is considered as a matter for further research (see section 8.5.1).

In addition to the texture and transitivity indices, the study advocates the use of *DICTION*, a form-oriented approach to content analysis. Of the three methods identified in the managerial business communications literature, it was noted in section 4.3.3 that *DICTION* is most directly oriented towards the requirements of accounting researchers investigating impression management. Its limited use to date in accounting applications, with only the 'certainty' variable having been investigated, was also noted. This study exploits *DICTION* towards its full potential.

Finally, in developing the transitivity index and *DICTION* analysis, the discussion regarding the theoretical justification of the approaches and their basis in linguistics will have regard to any such discussion in the managerial business communications literature.

Table 4.3 summarises the text-focused methods that will be developed in this study. Appropriate references to the detailed development chapters are also included.

Table 4.3
Text-focused methods developed in this study

Texture index [chapter 5] Note 1	**Transitivity index** [chapter 6, section 6.2]	***DICTION* analysis** [chapter 6, section 6.3]
Syntactic analysis: *Indexicals:* Intertextuality Conjunction Connectivity Specificity	**Syntactic analysis:** Transitivity: Verb form	
Thematic analysis: *(meaning-oriented)* *Indexicals:* Topicality Shift Situationality		**Thematic analysis:** *(form-oriented)* *DICTION* variables: Certainty Optimism Activity Realism Commonality

Note:

[1] The seven indexicals referred to here reflect the accounting application developed in this study. They differ slightly from the general model (see in particular, Table 5.1 and the discussion in section 5.3.4).

4.5 Investigating the syntactic dimension: redressing the imbalance

The texture index and the transitivity index go some way towards redressing the general lack of emphasis on the syntactic dimension, exhibited in the existing portfolio of approaches. In relation to the particular critique associated with the syntactic dimension, the texture index is developed expressly as an alternative to readability formulas. As a form-oriented approach to content analysis, *DICTION* does not embrace the syntactic dimension. It is included here as a specific answer to research question 1.3 (Table 4.1).

4.6 Identifying lines of development

The discussion in section 4.4 above, alluded to the two lines of development that will be pursued in this study. The first is the development of methods from the applied linguistics literature (the texture index). The second is the development of methods from the managerial business communications literature (the transitivity index and *DICTION* analysis). Table 4.4 summarises. For each of the methods developed, the basis of the approach in the linguistics literature is highlighted. Two dimensions are noted. First, the basis of the approach in applied linguistics is indicated. In this regard, the approaches all fall within the scope of a systemic approach to language study, as a particular dimension of applied linguistics. Second, the theoretical principles in linguistics upon which the applied orientation is based, are indicated.

Table 4.4
Lines of development

Accounting literature [this study]	Managerial business communications literature	Applied linguistics: A systemic approach	Theoretical basis in linguistics
←			
Line 1:			
Texture index		Texture index	Standards of textual communication
Line 2:			
Transitivity index	Measure of transitivity	Measure of transitivity	Transitivity
DICTION analysis	*DICTION* analysis ['certainty' variable]	*DICTION* analysis [five variables]	Linguistic semantics

Note on table as a whole:

This table is also included in chapters 1 (Table 1.5 in section 1.7.1) and 8 (Table 8.2 in section 8.1). It is included here since chapter 4 functions as a bridge between the literature reviews in chapters 2 and 3 and chapters 5 and 6, where the three text-focused methods contributed by this study are developed and described in detail

The structuring of the two detailed development chapters mirrors these two lines of development. The focus of chapter 5 is the texture index. The focus of chapter 6 is the transitivity index and *DICTION* analysis. Issues associated with interdisciplinarity and

future methodological development are discussed further in sections 8.5.1 and 8.5.2 as matters for further research.

4.7 Application of methods: research design and research questions

As indicated in section 4.1, it is necessary at this point to indicate the particular research designs and research questions that will provide a referent for the development of methods in chapters 5 and 6 and that will be used in the illustrative empirical application reported in chapter 7. Section 3.8 identified the particular requirements of accounting researchers investigating impression management. This discussion of requirements was framed in terms of the inputs, research designs and research questions that are typical of the literature. Reflecting on issues of research design in relation to the investigation of impression management is considered beyond the scope of this study. The intention here is to mirror the extant research designs.

All of the methods developed in this study give rise to dependent variables that can be used in tests of association and tests of differentiation (section 3.8). Of these two research designs, the second design, tests of differentiation, will be used in the illustrative empirical application reported in chapter 7. The selection of this particular research design reflects its emergence as the dominant model in the accounting literature, a model that is applied, irrespective of the particular textual dimension under investigation (section 3.8).

4.8 Application of methods: illustrative data

The overview of the data used in the illustrative empirical application is included here for two reasons. First, the methods are illustrated in chapters 5 and 6 using this data. Second, the methods, the texture index in particular, are developed with regard to the particular characteristics of the accounting narrative under investigation. A feature and strength of the texture index is its inherent adaptability, where the general model is applied to the specific situation of the accounting narrative that is the focus of investigation. Admittedly, some of the material in sections 4.8.1 to 4.8.4 might readily have been included in chapter 7 (in particular, section 7.3). It is considered more appropriate, however, to retain the majority of the material relating to the illustrative data under one section heading.

The data used in this study are the corporate annual reports of UK investment trust companies. While the selection of this particular data source is driven by the

methodological objective of this study (the primary objective), the data will also serve as a pertinent focus for empirical investigation (secondary objectives). Section 4.8.1 discusses the particular accounting narratives investigated. The appropriateness of the data for an illustrative empirical application is discussed in section 4.8.2. Section 4.8.3 summarises the data collected and analysed. Section 4.8.4 identifies and discusses some limitations.

4.8.1 Accounting narratives investigated

The review of the overall allocation of literature in section 3.7, noted that the Chairman's statement or its US equivalent, the President's letter, has been the dominant focus of attention of accounting researchers investigating impression management. While a number of reasons were identified for this, the lack of emphasis on 'OFR-type' narratives was noted as a gap in the literature. The analysis here, albeit in a limited way, will seek to redress this imbalance, by investigating the Manager's report in addition to the Chairman's statement. The investment trust Manager's report is written by the fund manager and is typically attributed to an individual, either the sole manager or the head of the management team. This document can be considered the equivalent of the *Operating and Financial Review* (ASB, 1993), the Accounting Standards Board's (ASB) statement of best practice on narrative reporting. The Manager's report is referred to in the industry specific Statement of Recommended Practice (SORP) (AITC, 1995). The industry regulator, the Association of Investment Trust Companies (AITC), has powers delegated to it from the ASB in matters regarding financial reporting.

Best practice for *both* the Chairman's statement and the Manager's report is outlined in the Association of Investment Trust Companies' *Guide to Good Practice for the Report & Accounts of Investment Trust Companies* (AITC, 2000). The AITC guide covers the parts of the corporate report not already prescribed by accounting standards, company law and the Stock Exchange Yellow Book. The term 'other information' is used for its coverage, matching the terminology of SAS 160, the relevant UK auditing standard and SAS 720, the corresponding international auditing standard. The AITC Guide is used as the basis for the rules for application of indexicals in chapter 5 (see in particular, section 5.4).

The empirical application will also yield some interesting insights into a firm's discretionary narrative disclosures in a UK context. Relatively few studies have

investigated impression management in accounting narratives in UK corporate reports (section 3.7).

4.8.2 Appropriateness of data for an illustrative application

There are a number of reasons why investment trust companies are particularly apposite as a data source for a methodologically focused application. These relate principally to industry comparability, comparability of accounting narratives and the availability of externally determined comparative performance statistics. Each of these aspects will be considered briefly in sections 4.8.2.1 to 4.8.2.3 following. In addition to these methodological issues, section 4.8.2.4 highlights a number of further reasons why investment trust companies are particularly interesting as a focus for studies investigating impression management.

4.8.2.1 Industry comparability

By focusing solely on investment trust companies, the industry factor is controlled. Within the investment trust sector, however, trusts are sub-categorised in accordance with their investment objective. These sub-categories are determined by an independent source, the industry regulator, the Association of Investment Trust Companies (AITC). Within these sub-sectors, the degree of comparability is enhanced. The particular sub-category investigated here is 'Smaller Companies: UK'. The investment objective of this sub-category is that at least 80% by value of the investment trust company's portfolio will be invested in the shares of UK registered companies and 50% by value of the portfolio invested in the shares of smaller and medium sized companies (AITC, Monthly Information Service). This sub-category has been selected principally because it is the largest single category, incorporating 27 trusts.

4.8.2.2 Comparability of accounting narratives

The high degree of comparability already referred to is reflected in the accounting narratives. For example, a consistent focus in both the Chairman's statement and the Manager's report, is the market conditions that pertain to the trust's portfolio. Given that trusts are sub-categorised on the basis of market orientation, then for a particular sub-category, the market conditions are consistent across the population.

Also, apart from one trust in the sample, all of the annual reports collected included a narrative statement entitled 'Manager's report' or 'Manager's review', indicating a greater comparability than exhibited, for example, by the Operating and Financial Review (Sydserff and Weetman, 1999). In his foreword to The *Guide to Good Practice for the Report & Accounts of Investment Trust Companies*, the technical director of the AITC comments on a high degree of comparability that is already evident in the industry (AITC, 2000, p. 2).

4.8.2.3 Externally determined comparative performance statistics

Typically, researchers investigating impression management compare narrative disclosures with financial performance indicators. There is considerable diversity in the literature as to the selection of the independent variable as a proxy for financial performance.

As an industry sector, investment trusts are subject to a plethora of independently determined relative performance statistics. These range from the popular investor literature, to web-based information providers, for example, TrustNet Investment Funds Information Service and Micropal Fund Analysis.

The comparative performance statistics used in this study are those produced by the AITC. For each month-end, the AITC provides a Monthly Information Service (MIS). The MIS includes detailed comparative performance statistics for each sub-category. The AITC statistics were selected for a number of reasons. First, the sub-category investigated in this study was that determined by the AITC. While other information providers such as TrustNet and Micropal recognise a similar category, the number of trusts included in the TrustNet and Micropal categorisations is significantly less. This is because trusts are required to subscribe, of their own volition, to these information providers and there is some evidence that the 'poor performers' are reluctant to subscribe to such a performance comparison. By contrast, the vast majority of trusts are

members of the AITC and are subject to their comparative performance statistics. Also, the archival data for research purposes available from the AITC is considerably more extensive than that available from the internet providers.

The use of these externally determined comparative performance statistics in constructing performance ranks from which sets of 'good performers' and 'poor performers' are determined, is discussed in detail in section 7.4.

4.8.2.4 Investment trust companies and impression management

In addition to the factors outlined in sections 4.8.2.1 to 4.8.2.3 above, there are a number of further reasons why investment trust companies are particularly interesting as a focus for studies investigating impression management. The success of an investment trust company is determined largely by its performance in direct comparison to its peers. This may influence the reporting strategies employed, in particular, the reporting strategies of 'poor performers' where an incentive might be to imitate 'good performers'.

Further, the very nature of an investment trust as an investment intermediary, removing the investment decision from the investor, is suggestive of the view that the vehicle will be particularly attractive to investors whose knowledge of financial statements is limited, thus placing a greater importance on narrative disclosures such as the Chairman's statement. This, in conjunction with the increasing popularity of investment trusts as an investment vehicle, in part generated by the year 2000 'its' marketing campaign in the UK, has given the sector a particularly high profile among investors. A recent survey exploring the perceptions of investment trust chairmen about the role of the annual Chairman's statement in communications policy and management found that the statement is used strategically "to create good impressions and build confidence. It is primarily a one-way exchange" (Clarke and Murray, 2000, p. 144). Finally, the whole area of 'other information' in the corporate report has been given a high degree of prominence in the investment trust sector, reflected in the recently published guide to good practice (AITC, 2000).

4.8.3 Summary of data collected and analysed

For each of the twenty-seven trusts in the sector, a written request was made in April 2000 for the latest annual report. After a number of follow up enquiries, twenty-six trusts responded with a copy of their annual report. The period of coverage in terms of

the accounting year-ends of the annual reports received was from 5th April 1999 to 31st March 2000. Appendix 4A summarises the data collected. This schedule is also included in chapter 7 (Appendix 7A) for ease of reference.

4.8.4 Limitations

The relatively small population that constitutes the UK: Smaller Companies sub-category of investment trusts, means that caution must be observed in drawing conclusions from the results. This is particularly the case given that the research design is the comparison of the narratives of 'good performers' with 'poor performers' (see section 4.7). With a total population of twenty-six, the difference in terms of financial performance between certain trusts categorised as 'good performers' and certain trusts classified as 'poor performers', is not significant. While it is acknowledged that this may be a limitation, there is nevertheless merit in investigating differences in the reporting practices of companies across a spectrum of performance, rather than companies at the extremities of performance rank. While it might intuitively be surmised that differences will be observable between *extremely* successful and *extremely* unsuccessful companies, differences between 'good performers' and 'poor performers' across a narrower spectrum, may be more subtle.

The particular sector of investment trust companies that is the focus of study, 'Smaller Companies: UK', was subject to a degree of abnormality in market conditions for the period under review. In particular, the performance of some technology stocks in the latter half of 1999 had a significant impact on the market (TrustNet Investment Funds Information Service). Given the period of coverage in terms of accounting year-ends of the trusts included in the sample (from 5th April 1999 to 31st March 2000), there may be a bearing on the relative performance comparison of the trusts.

4.9 Summary and conclusions

This chapter has outlined with some detailed commentary by way of justification the three text-focused methods that will be developed in this study. These methods will be developed in response to the areas of weakness and gaps identified in the literature (chapters 2 and 3) and in light of recent developments in the managerial business communications literature reviewed in this chapter. The three methods that will be developed in this study are the texture index (chapter 5), a transitivity index (chapter 6) and *DICTION* analysis (chapter 6). The chapter also included an overview of the research design and data that will be used in the empirical application reported in

chapter 7. This material was included here in order to provide a referent for the development and illustration of the methods through chapters 5 and 6.

Appendix 4A

Summary of data collected

Trust Id.	Year-end	CS	MR
A	28th Feb 2000	✓	✓
B	31st Dec 1999	✓	✓
C	30th Jun 1999	✓	✓
D	31st Jan 2000	✓	✓
E	31st Dec 1999	✓	✓
F	30th Apr 1999	✓	✓
G	31st Jan 2000	✓	✓
H	31st Oct 1999	✓	✓
I	30th Jun 1999	✓	✓
J	30th Jun 1999	✓	✓
K	31st Jan 2000	✓	✓
L	31st Jul 1999	✓	✓
M	30th Jun 1999	✓	✓
N	30th Jun 1999	✓	✓
O	31st Aug 1999	✓	✓
P	31st Oct 1999	✓	✓
Q	5th Apr 1999	✓	✓
R	31st Mar 2000	✓	✓
S	31st Mar 2000	✓	✓
T	30th Sep 1999	✓	✓
U	30th Jun 1999	✓	✓
V	31st Jan 2000	✓	✓
W	31st Dec 1999	✓	✓
X	31st Dec 1999	✓	✓
Y	31st Mar 2000	✓	
Z	30th Nov 1999	✓	✓

Key:

CS Chairman's statement
MR Manager's report

Note:

Also included as Appendix 7A

CHAPTER 5

THE TEXTURE INDEX: AN *ALTERNATIVE* TO READABILITY FORMULAS

5.1 Introduction and overview of chapter

This chapter describes a texture index or indexical approach. The texture index is based on six criteria for evaluating narratives. These criteria are referred to as indexicals. Narratives are scored for each indexical. Combining the indexical scores gives a score for texture.

The approach is developed here in response to the general call for developments in relation to the syntactic dimension and in response to the specific call for a text-focused alternative to readability formulas. Courtis (1998) articulates this in terms of the specific challenge to readability researchers to identify a defensible, reliable, representative measure of readability that takes account of variability. The critique of readability formulas in section 2.5.1, based on Jones and Shoemaker's (1994) consolidated criticisms, highlighted the principal limitations of readability formulas as a predominant focus on word- and sentence-level features of the narrative and not on whole-text aspects, a lack of regard for the interests and motivation of the reader and their inappropriateness for evaluating adult-based and technical accounting narratives.

This study accepts this challenge in proposing an alternative text-focused scoring approach, which responds directly to Jones and Shoemaker's consolidated criticisms. Within a systematic linguistic framework, the study describes in a preliminary way a texture index or indexical approach. The study demonstrates that the texture index approach has a sound theoretical basis in the linguistics literature, addresses validity in terms of the limitations referred to above and has rules which are sufficiently objective and reliable to enable the technique to be used by readability researchers in empirical studies.

In this regard, and given the overall orientation of the study, namely, the development of methods expressly with a view to investigating impression management in accounting narratives, the texture index must be capable of being used in empirical studies of that nature. Accordingly, in chapter 7, an illustrative accounting application

is presented, using the texture index as well as the other methods developed in the study (see chapter 6).

The texture index is illustrated in this chapter using examples from the Chairman's statement data analysed in the empirical application (chapter 7). In particular, Appendix 5C reproduces in full the texture analysis for one of the companies included in the empirical application. Appendix 5C.1 reproduces the text of the Chairman's statement sub-divided into t-units. Appendix 5C.2 explains in detail the analysis for each t-unit. Finally, Appendix 5C.3 shows the tabulated summary of the indexical scores. This tabulated summary also provides a model for a scoring sheet that can be used in texture analysis. While the format of this scoring sheet and the categories of analysis can be used in all empirical applications employing texture analysis, a degree of adaptability is inherent so that the approach can be adapted to the specific situation of the accounting narrative under consideration. Finally, Appendix 5C.3 is used in section 5.6 to illustrate the scope of texture analysis.

The structure of the chapter is as follows. Section 5.2 elaborates upon the theoretical linguistic framework from which the indexicals or components of the texture index are derived, indicating that the texture index has a sound theoretical base in the linguistics literature. Section 5.3 provides an overview of the texture index approach, showing how the general model drawn from applied linguistics can be tailored to the specifics of accounting narratives. Section 5.3 also describes the basic unit of analysis and the scoring system employed. In section 5.4, rules for application of indexicals are developed. For each indexical, rules which provide for objectivity in replication are specified and illustrated for the particular sample narrative that is the focus in this study. Section 5.5 demonstrates that the texture index is not a proxy for readability formulas, by comparing indexical scores with Flesch readability scores. In section 5.6, the scope of texture analysis is discussed, again using the sample narrative as illustration. This section will also reflect on that particular dynamic of the texture index that embraces both syntactic analysis and elements of meaning-oriented thematic analysis in a single approach. Section 5.7 discusses the interpretation of indexical scores. In section 5.8, the robustness of the categorial scoring approach is investigated by comparing ranks based on categorial scores with ranks based on sums of squares. Finally, section 5.9 concludes in relation to the texture index in terms of its satisfaction of the assessment criteria of validity and reliability. Section 5.10 summarises and concludes.

5.2 Developing an approach within a linguistic framework

The texture index for evaluating accounting narratives developed in this study (sections 5.3 and 5.4) is based on a general model, drawn from the applied linguistics literature. While interdisciplinarity with applied linguistics is becoming increasingly established in the accounting literature (section 4.3), given that the texture index is new to the accounting literature, it is important to demonstrate that the general model, and in turn the applied model, have a sound theoretical basis in the linguistics literature. In particular, it must be demonstrated that the theoretical framework encompasses the adaptability that is inherent in the approach that is developed in this study.

Section 5.2.1 describes the seminal work of de Beaugrande and Dressler (1981) and their standards of textual communication. Section 5.2.2 discusses the development of these principles into usable methods for analysis in the domain of applied linguistics.

5.2.1 de Beaugrande and Dressler's standards

The study of narratives in linguistics has developed from the seminal work of de Beaugrande and Dressler (1981). In their theory of textual or narrative communication they define a core set of principles or standards which determine the communicative effectiveness of narratives. The seven standards are: cohesion, coherence, acceptability, informativity, intentionality, intertextuality and situationality. Central to de Beaugrande and Dressler's theory is that the communicative effectiveness of narratives depends on satisfying all seven standards (de Beaugrande and Dressler, p. 3), which are categorised as text-centred and user-centred (de Beaugrande and Dressler, p. 7). Text-centred standards address the whole-text aspects of narratives, while the interests and motivation of the reader are incorporated in their user-centred standards. It should be noted that the concept of users adopted by de Beaugrande and Dressler includes both readers and writers.

5.2.1.1 Text-centred standards

The text-centred standards are cohesion and coherence. Cohesion refers to the ways in which different parts of the text, typically sentences, are linked together (de Beaugrande and Dressler, p. 3). De Beaugrande and Dressler standard of cohesion is based on Halliday and Hasan's (1976) study of cohesion in English. The cohesive devices in a text bind sentences together using linking words. These linking words express either semantic or grammatical relations, referred to by linguists as lexical cohesion and grammatical cohesion respectively (Carter *et al.*, 1997). Lexical relations involve

linking through meaning e.g. the repetition of key words and phrases. Grammatical relations involve linking through grammatical constructions, e.g. *which, although, as a result of.*

Coherence emphasises the structural organisation of sentences, the flow of ideas and the dependency of sentences on previous sentences (de Beaugrande and Dressler, p. 4; Hasan, 1984; Scinto, 1984; 1986). The importance of cohesion and coherence to the communicative effectiveness of narratives is widely acknowledged in linguistics research (e.g., Hatch, 1992; Hoey, 1991; McCarthy, 1991; Stoddart, 1991). Moreover, cohesion and coherence, with their focus on whole-text aspects are recognised as fundamental to developing an alternative measure of readability (e.g., Binkey, 1988; Olsen and Johnson, 1989).

5.2.1.2 User-centred standards

The user-centred standards are acceptability, informativity, intentionality and intertextuality. Acceptability means that the narrative is not only cohesive and coherent but also contains information that is of relevance for the reader, for example to acquire knowledge or provide co-operation in a plan (de Beaugrande and Dressler, p. 7). Informativity, closely related to acceptability, asserts that the narrative contains incremental information (de Beaugrande and Dressler, p. 8). The standards of acceptability and informativity consider the reader. The requirements of the writer are recognised through the standard of intentionality. This concerns the writer's attitude that there should be a coherent and cohesive text relevant to the writer's intentions, for example to distribute knowledge or to attain a goal specified in a plan (de Beaugrande and Dressler, p. 7). The final user-centred standard, intertextuality, is concerned with the ways in which the production and reception of a given narrative depends upon the users' knowledge of other material (de Beaugrande and Dressler, p. 10). This is of particular relevance to accounting narratives, where the production and reception of the narrative sections of the annual report depends upon the reader's knowledge of the regulated financial statements.

5.2.1.3 Situationality

Situationality means that the narrative must be relevant to the particular context in which it occurs (de Beaugrande and Dressler, p. 9). For example, the relevant context for a narrative such as the OFR is the annual report.

5.2.2 Applied linguistics: developing usable methods for analysis

The development of these principles into usable methods for analysis is the domain of applied linguistics. As indicated in section 4.4 (see also Table 4.4 (in section 4.6)), the texture index falls within the scope of systemic linguistics. Systemic linguistics is a particular dimension of applied linguistics which is concerned with how linguistic structures are exploited in strategic narrative construction (see e.g., Halliday, 1976; 1978; 1985; Lemke, 1989; Fawcett and Halliday, 1978; Butler, 1985). The three methods in the managerial business communications literature identified in chapter 4 also fall within the scope of systemic linguistics (section 4.3).

Given the complexity of developing multi-standard approaches, methods developed expressly for scoring narratives have, until recently, tended to focus on only one standard. In particular, cohesion analysis has been shown to be reliable and objective. Halliday and Hasan's (1976) cohesion analysis technique, refined by Winter (1979), Stotsky (1983), Hasan (1984), Halliday and Hasan (1989), Hoey (1991) and Stoddart (1991) has been widely used in empirical studies in linguistics (e.g., Cameron *et al.*, 1995; Neuner, 1987; Peterson and Dodsworth, 1991). More comprehensive approaches have been developed relatively recently, for example, Lovejoy (1991), Lovejoy and Lance (1991), Roseberry (1995) (hereafter, Roseberry), Thomas (1997) and Hyland (1998a).

Of these, Roseberry's texture index is the only one developed specifically as an alternative to readability formulas. It has a sound theoretical basis in de Beaugrande and Dressler's theory of narrative communication and is externally validated using direct reader involvement. Furthermore, aspects of the approach are based on established single-standard approaches, in particular, Halliday and Hasan's (1976) cohesion analysis technique. Roseberry's unit-by-unit analysis provides a detailed measure of variability within the narrative. He claims particular relevance to business applications and his method is generic in its application, allowing specific adaptation to a particular type of narrative. Moreover, the measurement model is particularly appropriate for the investigation of impression management and embraces a meaning-oriented thematic analysis in addition to syntactic analysis. Finally, and perhaps most importantly, the approach measures strongly against the framework of assessment criteria, achieving a balance between the necessity for objectivity to strengthen validity and reliability, yet embracing a sophisticated in-depth analysis. The approaches advocated by Thomas (1997) and Hyland (1998a) were reviewed in sections 4.3.1 and

4.3.2 respectively. While aspects of these approaches are reflected in the texture index, their orientation and scope is different (see the discussion in section 4.4). Aspects of Thomas' approach are reflected in the development of the transitivity index (section 6.2). In addition, there are a number of methodological issues associated with Hyland's metadiscourse analysis (see here sections 4.3.2 and 4.4), which point to the texture index as a more appropriate model to be developed for accounting researchers investigating impression management.

5.3 An overview of the texture index approach

Roseberry's model applies six criteria for evaluating narratives, based on the theoretical principles of de Beaugrande and Dressler but having regard to the extensive subsequent research which has refined and advanced these principles, including van Dijk (1988), Halliday and Hasan (1989), Hoey (1991), Stoddart (1991) and Virtanen (1992). Roseberry calls the six criteria 'indexicals', emphasising that the combined package of indexicals characterises texture, defined by him as follows:

> Texture is a property of texts that causes them to appear to be meaningful to an interpreter (e.g. reader, listener). Such a text makes sense, does not suffer from glaring omissions, focuses on a single topic or a small set of closely related topics, expands meaningfully on each topic that it contains, proceeds smoothly and comprehensibly from one topic to another, relates clearly to its context…(Roseberry, p. 214).

Before the indexicals are considered in detail, the basic unit of analysis is defined and the scoring system explained.

5.3.1 Basic unit of analysis

Roseberry uses a well-established practice in text analysis (see e.g., Witte and Faigley, 1981; Allard and Ulatowska, 1991; Cameron *et al.*, 1995) whereby the narrative is evaluated by subdivision into text-units ('t-units'). A t-unit is defined as one independent clause with all subordinate clauses attached to it. Generally, this equates to a sentence as written, but there are instances where two units of narrative which satisfy this definition are linked by a conjunction. In the linguistics literature, these are treated as separate t-units. The same approach is followed in this study. Where a graph or table is included in the body of the text, this is treated as a separate t-unit, with the indexical score based on the supposed 'narrative equivalent'. This excludes any narratives that are referred to in the text, typically by explicit intertextual reference (see section 5.4.2), but are physically located elsewhere in the report. The basic unit of analysis for the texture

index approach has been used widely in the accounting literature (see in particular, the discussion at 2.5.2 in relation to the sentence-based coding instrument and decision-rules developed in Hackston and Milne (1996)).

5.3.2 Scoring approach

The scoring system used by Roseberry is essentially a categorical score of '2', '1' or '0' for each indexical. A score of '0' indicates the absence of the particular characteristic of texture, while scores of '1' or '2' indicate defined degrees of its existence in the t-unit. Categorical scores allow ranking and the use of non-parametric statistical tests. In assigning indexical scores to each t-unit, the researcher can record variability within the narrative. As already indicated, in section 5.8 the robustness of this categorial scoring approach is investigated by comparing ranks based on categorial scores with ranks based on sums of squares. The discussion in section 2.5.2 noted that the strength of face validity is dependent on the objectivity of the coding method and correct measurement specification. In relation to this issue, Jones and Shoemaker (1994) note that face validity is stronger when human inferences require only nominal coding (i.e., 0 or 1) (p. 162).

In scoring the text as a whole, following Roseberry, indexical scores are expressed as a percentage of the maximum possible score for the particular indexical or for overall texture. For example, if a text comprises 20 t-units, then the maximum score for topicality would be '40' (where the maximum score of '2' for topicality is assigned to each t-unit). If then the text scored '20' for topicality based on the sum of the scores for the individual t-units, then the reported score for topicality would be 50%. This summation and expression facilitates comparison between t-units.

5.3.3 Roseberry's indexicals: A 'general' model

Roseberry identifies six indexicals: topicality, conjunction, connectivity, conjunctive reach, topic shift and specificity. He provides general linguistic definitions for the indexicals constituting the texture index. These must be converted to specific definitions for the type of narrative to which they are to be applied (Roseberry, p. 215), and supported by external validation of the criteria. This is a familiar practice in the voluntary disclosure literature in accounting (Marston and Shrives, 1991) where checklists are derived from sources independent of the researchers, such as good practice guidance or expert opinion. In the case of the Chairman's statement of investment trust companies, the independent source is the AITC's *Guide to Good*

Practice for the Report & Accounts of Investment Trust Companies (AITC, 2000). The AITC's document is designed as a formulation and development of best practice. Effectively the AITC statement is a specification of perceived users' needs, which may be applied as an alternative to determining users' needs by direct enquiry of the users. A similar approach was followed by Sydserff and Weetman (1999) in developing rules for the OFR, where the independent source was the Accounting Standard Board's Statement *Operating and Financial Review* (ASB, 1993). Again, this statement is designed as a formulation and development of best practice and as a specification of perceived users' needs.

With the indexical approach, the reader's involvement in the evaluative process is indirect. With any text-focused method, the involvement of the reader can only be by indirect association. One reason why Roseberry's model was selected is because it was externally validated by direct reader involvement. Roseberry's index was validated by subjecting four narratives to the judgement of nineteen 'expert judges', who were asked to rate the overall texture of the narratives on a rating scale of 1 to 10, based on Roseberry's definition of texture. The expertise of the judges lay in linguistics because they were verifying the linguistic integrity of the model. Their ratings were then averaged and correlated with the texture index scores for the narratives. Roseberry observed a perfect rank-order correlation (+1.0) between the average scores and the texture index scores for the four narratives (p. 214). To determine how well the scores of the nineteen judges correlated with each other, Kendall's Coefficient of Concordance was calculated over these scores. This yielded a chi-square value of 18.475, well above the critical value of 16.266 for three degrees of freedom at $p = .001$. Roseberry thereby concluded that the indexicals reflected those elements of texture that readers perceive as crucial in interpreting narratives. Moreover, the index gives a highly reliable rating of texture.

5.3.4 Developing the model for accounting applications

When Roseberry's model is compared to de Beaugrande and Dressler's standards, it is noted that two of the standards, intertextuality and situationaility are not included as indexicals. The model developed in this study for accounting narratives includes intertextuality as an indexical because the production and reception of accounting narratives depends upon the users' knowledge of other material, in particular, the regulated financial statements. Further, situationality is not included by Roseberry but is included here for completeness because it confirms the relevance of the narrative as a

whole, typically in the context of the annual report. The relationship of Roseberry's indexicals to de Beaugrande and Dressler's standards is summarised in the second and third columns of Table 5.1. The first column of Table 5.1 shows how the proposed indexicals for application to the Chairman's statement of investment trust companies, developed in section 5.4, are related to Roseberry's indexicals. Detailed explanations are provided in the relevant sections.

Table 5.1

Relating indexicals to de Beaugrande and Dressler's standards

This study's indexicals for application to the Chairman's statement of investment trust companies.	***Roseberry's indexicals***	***De Beaugrande and Dressler's standards***
User-centred		
Topicality *(section 5.4.1)*	Topicality	Intentionality Acceptability Informativity
Intertextuality *(section 5.4.2)*	*Not used*	Intertextuality
Text-centred		
Conjunction based on grammatical cohesion *(section 5.4.3)*	Conjunction	Cohesion Coherence Specificity
Connectivity based on lexical cohesion and reach *(section 5.4.4)*	Connectivity	
	Conjunctive reach	
Specificity *(section 5.4.5)*	Specificity	
Shift in information category *(section 5.4.6)*	Topic shift	
Situationality *(section 5.4.7)*	*Not used*	Situationality

[Note: Specificity is discussed by de Beaugrande and Dressler in the context of cohesion]

5.4 Rules for application of indexicals

In this section, decision rules for application of indexicals are developed. This is a critical factor in attaining the required degree of reliability. Reproducibility, and therefore reliability, is dependent on the degree of correlation between two or more coders using the same text. For each indexical, rules which provide for objectivity in replication are specified and illustrated for the Chairman's statement of investment trust companies. Where appropriate, the rules developed here are compared with those developed by Sydserff and Weetman (1999) for application to the OFR. While there are a number of similarities, there are also a number of differences. These differences are

consistent with the adaptability that is inherent in the texture index approach, where the general model is applied to the specific situation of the accounting narrative that is the focus of investigation.

The following sections (5.4.1 – 5.4.7) should be read in conjunction with the illustrative example included in Appendix 5C. The tabulated summary of indexical scores (Appendix 5C.3) provides a model of a scoring sheet for texture analysis. Appendix 5C.2 provides a detailed explanation of the scoring for each t-unit by indexical.

5.4.1 Indexical 1: Topicality

Topicality, as a characteristic of texture, is concerned with the subject matter of the narrative. The indexical, topicality, is a measure of the degree to which the narrative adheres to the main topic(s) and the overall topic framework (Nunan, 1993; Roseberry; van Dijk, 1988). The main topic(s) of the narrative are those which are deemed essential to its stated purpose. For a particular narrative there may be one or more main topics. Supporting statements are a necessary part of the overall topic framework but do not meet the criteria for main topic(s). Non-related statements are those which are beyond the topic framework. Topicality is based on the standards of intentionality, informativity and acceptability (de Beaugrande and Dressler). Intuitively, a consideration of topicality may be seen in those studies of accounting narratives which make explicit reference to the incremental nature of narrative disclosures (e.g., Bryan, 1997; Smith and Taffler, 1995). In terms of the Chairman's statement for investment trust companies, main topics are defined in accordance with the AITC Guide. As already indicated, this Guide represents a specification of perceived users' needs. There is a potential problem in interpreting the Guide in order to determine what are main topics and what constitutes supporting statements. The problem lies in the subjective interpretation of the researcher. Accordingly, following the initial text analysis to determine the main topics and supporting statements, a meeting was arranged with the chairman of the AITC working party responsible for the preparation of the Guide. Following this process, five main topics were identified. These are detailed in Table 5.2 below.

Table 5.2
Main topics for Chairman's statement of investment trust companies

Topic Id.	Description
A	**A trend or factor affecting results.** This includes: (i) Review and commentary on key aspects of the Manager's performance (para. 5), what is termed in the Manager's report, "performance attribution analysis" (para. 6.3)) or "how the trust achieved what it did" (para. 6.3). Such a commentary would refer *inter alia.* to the market environment, the general economic environment, stock selection, investment strategy etc. (ii) A change in accounting policy which has affected results (para 5.8b). (iii) Any significant changes in capital such as buying-in or issuing of securities (para. 5.8c). (iv) Any significant changes in gearing (para. 5.8d).
B	**Prospects for markets and earnings and general outlook for the company** (para. 7). This might be termed 'forward-looking' information. Note – t-units categorised as main topic 'B' include disclosures relating to main topics 'A', 'C', 'D' & 'E' where there is an expressed indication of a forward-looking element.
C	**Explanation of ratios** [included in Year's summary] (para. 8a). This includes: (i) Net asset value (NAV) total return (para. 4.3a). (ii) Share price total return (para. 4.3a).
D	**Comparative analysis** Comparison with a specified benchmark index (para. 4.3a). Comparative performance within industry sector (para. 4.3a). Comparative performance over time (para. 4.3c).
E	**Commentary on dividends and earnings** (para. 6).

As well as the five main topics, some t-units will contain supporting information relevant to the Chairman's statement, but not conforming to one of the five essential features. Following Roseberry, the scoring is as follows:

Table 5.3
Topicality: scoring and rules for classification

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2 The t-unit states a defined main topic.

1 The t-unit makes a supporting statement within the overall framework defined for the narrative.

0 The t-unit refers to a matter not related to the overall framework defined for the narrative.

Rules for classification are established by the following sequence of questions:

1. Does the t-unit indicate:

   A a trend or factor affecting results;

   B prospects for markets and earnings and general outlook for the company;

   C explanation of ratios;

   D comparative analysis;

   E commentary on dividends and earnings?

   If the answer to any of these is 'yes', then score = '2'.

   [In a number of instances, one t-unit can contain disclosures relating to two or more main topics in combination. In such instances, while the occurrence of each main topic is recorded on the scoring sheets (see Appendix 5C.3), the overall score for topicality for that t-unit is '2', being the maximum score for topicality for any particular t-unit. This is consistent with the approach followed for other indexicals, while at the same time allowing identification in terms of coverage of the different main topics disclosed. Notwithstanding these comments, however, identification of two topics in one sentence leads to careful consideration of whether there are in fact two t-units present.]

   If the answer to all of these questions is 'no', then proceed to question 2.

2. Does the t-unit make a supporting statement of factors underlying its results and financial position relevant to the Chairman's statement?

   If 'yes' then score = '1'.

3. If the answer is 'no' at this point, then score = '0'.

As already indicated, main topic B might also be termed forward-looking information. Our working definition of forward-looking is capable of being used in creating a model of the company for the purposes of forecasting. This is based on previous research into the views of analysts and fund managers on the way in which they use information to make their forecasts (e.g., Day, 1986; Weetman *et al.*, 1994; Holland, 1998). Words and phrases found in the Chairman's statement (based on the empirical application reported in chapter 7) include:

> *forward; from now on; further; future; has begun to make; is unlikely to continue* (where the reader might otherwise presume continuity); reference to a date beyond the balance sheet date; target; use of the future tense.

There are close parallels between the method of evaluating topicality presented in this study and much of the thematic content research in the accounting literature. For example, Smith and Taffler's (2000) thematic structure approach, categorises sentences for thematic content by reference to the incidence of keywords.

There are a number of similarities with the main topics identified by Sydserff and Weetman (1999) for analysis of the OFR. For the purposes of the OFR, four main topics are identified. These were the four essential features of the 'spirit' of the ASB Statement identified in prior research (Weetman *et al.*, 1994; Weetman and Collins, 1996). They are included here for comparative purposes (Table 5.4).

Table 5.4
Main topics for OFR

Topic Id.	Description
A	A trend or factor affecting results and having a forward-looking element
B	A trend or factor affecting results but without indication of a forward-looking element
C	Use of ratios
D	Explanation of a change in accounting policy.

[Source: Sydserff and Weetman (1999, p. 466)]

5.4.2 Indexical 2: Intertextuality

Intertextuality, one of de Beaugrande and Dressler's user-centred standards, concerns the factors that make the use of one narrative dependent upon knowledge of other material. Roseberry did not make use of this standard in developing his indexicals but, as explained earlier, it is included in this study because of its particular relevance to accounting narratives, which are set in the wider documentary context of the annual report, which itself exists as part of a continuum of reports.

In relation to the Chairman's statement, the AITC guide specifies that the statement should be prepared in a way that best complements the format of the annual report as a whole (AITC Guide, 2000, para. 5.2). In terms of specific guidance, the AITC indicates that the statement should include mention of all major events affecting the company in the past year (AITC Guide, para. 5.8), which would include, for example, an explanation of the key figures included in the Year's summary (AITC Guide, para. 5.8a). The Guide also states that the Chairman's statement should review and comment on the key aspects of the Manager's performance, which may involve a degree of repetition of comments that will appear in the Manager's report (AITC Guide, para. 5.5), although attention should be given to ensuring complementarity, where the Company summary, Chairman's statement and Manager's report are linked but not overly repetitive (AITC Guide, para. 1.4).

Taken together, these comments are suggestive of an expectation that significant features will be discussed and that readers will be guided by the writer to the main features of the annual report or to other reports in the continuum of the reporting cycle, for example interim reports. It could be explicit guidance, as in giving a page reference, or it could be implicit, where the directors have selected information already available elsewhere in the document. The expert reader will know which items are repeated from other parts of the document; the less expert reader may appreciate having selective material presented, provided the selection is unbiased. The narrative must contain links to other parts of the annual report if it is to achieve the aims stated by the AITC. The scoring is as follows:

Table 5.5
Intertextuality: scoring and rules for classification

2	Explicit intertextual reference to some other part of the annual report or to a published source beyond the annual report.
1	Implicit intertextual reference by repeating an item extracted from another section of the annual report.
0	No intertextual reference.

Rules for classification are established by the following sequence of questions:

1. Does the t-unit give a specific reference to a location in the annual report or to a published source beyond the annual report?

   If 'yes' then score = '2'.

2. Does the t-unit contain an item of information whose origin is known to the expert reader to be elsewhere in the annual report or in a published source beyond the annual report?

   If 'yes' then score = '1'.

3. Does the t-unit contain information for which there is no specific reference and no known origin in the other sections of the annual report or in a published source beyond the annual report?

   If 'yes' then score = '0'.

Appendix 5A provides a tabular analysis of the different sections included in the investment trust company annual report, based on the sample included in this study (see section 7.3 (also, section 4.8 and relevant sub-sections)). While there is a considerable degree of homogeneity in terms of the structure and content of the reports, allowing the generalisation of rules for scoring intertextuality, each report was nevertheless analysed on an individual basis. For example, for a particular disclosure in the Chairman's statement which it might be supposed is developed more fully in the Manager's report, the Manager's report was reviewed for the inclusion (or not) or elaboration upon (or not) of that particular statement.

The AITC's guidance on the intertextual nature of the Chairman's statement for the Report and Accounts of investment trust companies is developed further in the guidance for the preparation of the Manager's report. For example, the introductory paragraph in the relevant section stipulates that the Manager's report should cover technical issues but that it should not be overly complicated and that it should be complementary to the

Chairman's statement (AITC Guide, section 6, intro.). Although the Manager's report is not the focus for texture analysis in this study, it is nevertheless relevant in that in its complementary to the Chairman's statement, it is relevant for scoring intertextuality for the Chairman's statement.

Sydserff and Weetman (1999) found that intertextuality is also a key feature of the ASB's guidance on narrative reporting for the OFR. "Directors are encouraged by the ASB to develop the presentation of the OFR in a way that best complements the format of the annual report as a whole (ASB Statement, 1993, para. 2). The ASB indicates that the OFR should be readily understandable by the general reader of annual reports (ASB Statement, para. 3)" (Sydserff and Weetman, 1999, p. 467).

The rules for classification reported in Sydserff and Weetman (1999) differ slightly from those detailed above. This is due to the necessary adaptation of the rules so as to capture the specific features of the accounting narrative that is being analysed and the reporting context in which it occurs. While the general principles of analysis are the same, some latitude must be retained in adapting the rules to the particular context under consideration.

5.4.3 Indexical 3: Conjunction

Conjunction, as a characteristic of texture, is concerned with the specific words or phrases (referred to as conjunctive markers) which function as links and bind narratives together (Carter *et al.*, 1997). The presence of such devices distinguishes a narrative from what would otherwise be a collection of unconnected units (Cameron *et al.*, 1995). Conjunction is based on de Beaugrande and Dressler's standard of cohesion. Drawing on the established technique of cohesion analysis (Halliday and Hasan, 1976), Roseberry refers to three types of conjunctive marker: causal, adversative and additive. Causal markers signal a relationship of cause and consequence (e.g. *consequently; as a result; for this reason*). An adversative marker is a signal that subsequent information modifies preceding information (e.g. *however; although*). Finally, an additive marker is a signal for additional information (e.g. *furthermore; in addition*), exemplification (e.g. *for instance; thus*) or the restatement of information previously given (e.g. *in other words; namely*).

Texts characterised by causal and adversative conjunction are said to be more highly textured than texts characterised by additive conjunction (Halliday, 1985). On that

basis, Roseberry awarded a score of '2' for causal or adversative conjunction and a score of '1' for additive conjunction.

Turning to the specific guidance offered by the AITC for preparation of the Chairman's statement for investment trust companies, the higher score for causal or adversative conjunction is consistent with the requirement that the Chairman's statement should "review", "comment on" and "explain" (see *inter alia.*, AITC Guide paras. 5.5, 5.8a, 5.8b, 5.8c, 5.8d). These characteristics are broadly similar to the relationships signalled by causal and adversative markers. The scoring is as follows:

Table 5.6
Conjunction: scoring and rules for classification

2	Words or phrases are used which explicitly indicate a relationship of cause and effect (causal conjunction), or explicitly indicate a situation where subsequent information modifies preceding information and may be contrary to expectation (adversative conjunction).
1	Words or phrases are used which signal more specific restatement of information previously given in the narrative (additive conjunction).
0	No conjunction.

Rules for classification are established by the following sequence of questions:

1. Does the t-unit contain a causal or adversative marker?

   If 'yes' then score = '2'.

2. Does the t-unit contain an additive marker?

   If 'yes' then score = '1'.

3. If there are no causal, adversative or additive markers, then score = '0'.

In scoring for conjunction, the causal, adversative or additive markers need not occur at the head of the t-unit, that is the first word or phrase of the t-unit. A typical pattern would be the modification, extension or exemplification of an independent head clause by a subsequent subordinate clause within the same t-unit. The position of the conjunctive marker would be at the head of the subordinate clause.

Where a t-unit contains more than one conjunctive marker, then the score for conjunction for the t-unit as a whole is based on the conjunctive marker that attracts the highest score in the t-unit. In other words, if a t-unit has an adversative or causative marker (scoring '2') and an additive marker (scoring '1'), the t-unit would score '2' for conjunction. The occurrence of multiple markers at the same level, for example two or more conjunctive or adversative markers or two or more additive markers, does not affect the overall score.

Halliday and Hasan (1976) provide a detailed taxonomy of conjunctive markers found in narratives. The use of their taxonomy is well established in the linguistics literature (see for example, Cameron *et al.*, 1995; Halliday, 1987; Peterson and Dodsworth, 1991). Appendix 5B is a taxonomy of conjunctive markers found in the Chairman's statement (based on the empirical sample in this study (chapter 7)). This taxonomy is inclusive of all the conjunctive markers analysed and includes the markers that were identified for illustrative purposes by Sydserff and Weetman (1999, p. 469).

Further, the scoring approach and rules of classification for conjunction reported here are consistent with the scoring approach for conjunction in the OFR adopted by Sydserff and Weetman (1999), where the higher score for causal or adversative conjunction is consistent with the requirement that the OFR should "discuss and analyse" (ASB Statement, para. 1); "explain the reason for" (ASB Statement, para. 3); and "identify and explain the main factors" (ASB Statement, para. 8).

5.4.4 Indexical 4: Connectivity

In Roseberry's model, connectivity as an indexical is a measure of the degree to which each succeeding part of a narrative answers a question that could have been generated out of an earlier part (Roseberry, p. 210). Strong connectivity occurs where this relation of question and answer is overtly signalled in the text; weak connectivity where the relation is implicit. Roseberry's indexical is based on de Beaugrande and Dressler's standard of coherence. Without the necessary degree of connectivity, the communicative effectiveness of the narrative is hindered. Weak connectivity can therefore be associated with obfuscation, a term which hitherto has been linked with readability scores, whereby management will seek to obfuscate bad news through the strategic exploitation of those aspects of syntactic structure captured in readability scores, namely word length, word frequency and sentence length (section 3.4.1).

In analysing question-and-answer sequences, researchers require proxy evidence that a potential question is being answered. This study develops rules of evidence for overt signalling by drawing on the technique of lexical cohesion analysis (Halliday and Hasan, 1976). Lexical cohesion means creating semantic links from one t-unit to the next by the repetition of words and phrases (Carter *et al.*, 1997). Lexical cohesion permits definition of the existence of a semantic link. Conjunctive reach, as defined by Roseberry, is a measure of the distance from the current t-unit to another t-unit linked by lexical cohesion. Combining the two gives a measure of the existence and relative strength of connectivity. Because of the linking of lexical cohesion and conjunctive reach, the study departs from Roseberry where conjunctive reach is included as a separate indexical.

The scoring is as follows:

Table 5.7
Connectivity: scoring and rules for classification

2	Strong connectivity. Words or phrases explicitly create a link with the previous t-unit.
1	Weak connectivity. Words or phrases implicitly create a link with the previous t-unit through a substitute word or phrase, or explicitly create a link with an earlier t-unit other than the previous t-unit.
0	No connectivity.

Rules for classification are established by the following sequence of questions:

1. Does the t-unit contain a word or phrase which explicitly creates a link with the previous t-unit?

   If 'yes' then score = '2'.

2. Does the t-unit contain a substitute word or phrase, which creates an implicit link with the previous t-unit?

   Does the t-unit contain a word or phrase which explicitly creates a link with an earlier t-unit other than the previous t-unit (i.e. where reach > 1 t-unit)?

   If 'yes' then score = '1'.

3. If there are no words or phrases indicating a link to a previous t-unit, then score = '0'.

Halliday and Hasan (1976) provide a detailed taxonomy of the types of words and phrases used to express these links in narratives. Examples of words or phrases found in the Chairman's statement, which create explicit links include:

> either specific reference back to the same thing: e.g. *and this return; and these costs;* or repetition of a word from the previous sentence, provided it carries the same meaning, e.g. *costs...the costs are, return...a significant contribution to growth in net asset value*; or *trend...the trend is.*

The meaning has to be considered because words are not used consistently in business writing. For example, the word *results* may mean asset return in one t-unit, but may refer to an outcome measured by a non-financial indicator in the next t-unit. Examples of substitute words or phrases found in the Chairman's statement, categorised by type according to Halliday and Hasan's (1976) taxonomy, are:

Synonyms or alternatives:	e.g. *asset growth...good progress income...revenue*
Antonyms or opposites:	e.g. *out-performance...under-performance*
A whole-part relationship:	e.g. *sector...sub-sector*
Ordered series:	e.g. *the first quarter...the second quarter...; the first initiative...the second initiative*

For any text there are likely to be multiple connective links, creating an increasing complexity in the patterns of connections as the text develops. In scoring for connectivity it is only necessary to identify and record the links which give rise to the score for connectivity i.e. the first explicit or implicit link as appropriate. The illustrative explanation of analysis by t-unit in Appendix 5C.2 only records those connective links, which give rise to the score for connectivity.

While the rules for scoring connectivity, in terms of the principles and structures of the rules, will be identical for scoring different types of accounting narratives (see for example, Sydserff and Weetman, 1999, pp. 469-470), the particular words or phrases that are used to establish explicit and implicit links in the narrative will vary. For example, the nature of investment trust company narratives, from which the above examples are drawn, are such that reference is typically to *income* and *return* rather than *turnover* and *profit*. In this regard, the examples of linking words and phrases reported by Sydserff and Weetman (1999) were different in a number of respects from those reported here. While this was due in part to a different accounting narrative being the focus of attention, the nature of the companies / industries reflected in the sample also gave rise to differences. As with the other indexicals, while the general principles of

analysis are the same, some latitude must be retained in adapting the rules to the particular context under consideration.

5.4.5 Indexical 5: Specificity

Specificity is a measure of the extent of specific reference material in a narrative. Specificity is not one of the standards of de Beaugrande and Dressler but is discussed by them in the context of cohesion (p. 64). The indexical is included by Roseberry on his contention that "texts that abound in generalities approach in fact a situation in which everything is related in extremely vague ways to everything else. The effect on most interpreters, however, is the opposite. Nothing seems significantly related to anything else...Without a reasonable degree of specificity at critical points of the text, the situational context vanishes, taking with it much of the information required for interpretation" (p. 210).

The inclusion of the indexical specificity is consistent with the expectation that the Chairman's statement provides information useful to users. Professional investors and their advisers build models of a company (Holland, 1998) and thereby need specific information, usually quantitative. Given the quantitative, numerate orientation of accounting narratives, specificity might then be considered as a measure of the extent to which quantitative information is included in the narrative. The scoring is as follows:

Table 5.8
Specificity: scoring and rules for classification

2	Highly specific; focus predominantly on quantitative analysis, fact and detail.
1	Mixture of general and specific.
0	Focus predominantly on generalities.

Rules for classification are established by the following sequence of questions:

1. Does the t-unit give unambiguous quantification of the matter to which it refers?

   If 'yes' then score = '2'.

2. Does the t-unit give partial quantification, leaving some residual uncertainty?

   If 'yes' then score = '1'.

3. Does the t-unit give no quantification?

   If 'yes' then score = '0'.

In analysing t-units for specificity, where quantification is given, words and phrases such as *wholly*, *virtually all,* or *substantially all* are associated with unambiguous quantification (score = '2'), unless the accompanying figure or figures give cause to doubt the wording (score = '1'). Words or phrases such as *partly* or *mainly due to* are associated with partial quantification (score = '1'). In scoring for specificity, numerate quantification is not required to merit a score. For example, where a particular factor is attributed to an increase in interest rates, that is deemed partial quantification, and would merit a specificity score of '1'. Unambiguous quantification, meriting a specificity score of '2' would be where the exact extent of the interest rate increase was specified e.g. 2 per cent. Finally, a high score for specificity would also be attributed to a t-unit which contained, for example, a precise statement of an accounting policy or investment strategy.

The rules for classification reported in Sydserff and Weetman (1999) are the same as those detailed above.

5.4.6 Indexical 6: Shift in information category

Roseberry calls this topic shift, but that could lead to potential confusion because he is referring to information categories rather than the topics listed under topicality. Here, the term shift (shift in information category) is used.

To preserve interest in a narrative or to develop ideas, the information category must change from time to time. This is usually done in an orderly way, but presents a potential stumbling block for interpretation because of a potential loss of coherence. The indexical shift measures this potential loss of coherence.

In terms of the Chairman's statement, a shift in information category could be seen as disrupting the flow. However the Chairman's statement has to move through a range of information categories to achieve what might be referred to as a 'top-down' structure. This general principle is articulated in the section of the AITC Guide pertaining to the Chairman's statement where "[c]onsideration should be given to the statement being broken up with bullet points and headings" (AITC Guide, para. 5.3). The AITC Guide does not prescribe a list but gives indication of the main items of accounting and financial information expected in the Chairman's statement such as a review of the Manager's performance, dividends, earnings, prospects, explanation of key figures, capital structure / re-structuring, gearing etc. While the use of discretion is encouraged,

such that information disclosed should be complementary rather than repetitive (AITC Guide, para. 5.2), it is expected that given the comparability in terms of reporting practices observed between different trusts, there will be limited variation in terms of categories from one trust to the next.

The measure of topic shift is therefore a quantification of how many information categories are contained in the narrative and how frequently the category changes. As this analysis requires only an 'absent/present' classification, only two scores are used by Roseberry. Accordingly, the scores '1' and '0' are used for this indexical. The scoring is as follows:

Table 5.9
Shift: scoring and rules for classification

1	Does not shift information category.
0	Shift in information category.

Rules for classification are established by the following sequence of questions:

1. Is the information category the same as that of the previous t-unit?

   If 'yes' then score = '1'.

2. Is there a change of information category from that of the previous t-unit?

   If 'yes' then score = '0'.

Once again, while the general principles of analysis are the same, some latitude must be retained in adapting the rules to the particular context under consideration. Different accounting narratives will have different information categories. For example, the categories observed for the OFR (Sydserff and Weetman, 1999, pp. 470-471) were different from those reported here. Also, intuitively, it can be surmised that the categories included in the Chairman's statement of investment trust companies will not be generic to the Chairman's statement *per se*.

5.4.7 Indexical 7: Situationality

The standard of situationality is not included by Roseberry as an indexical. For completeness, however, it is included in this study in the indexicals for application to the Chairman's statement. Situationality is either satisfied or not for the narrative as a

whole and is therefore not relevant to a unit-by-unit analysis. Satisfaction or not of the standard is established by the following question:

Table 5.10
Situationality: scoring and rules for classification

Does the Chairman's statement occur in the relevant context i.e. the annual report?
If 'yes', then the standard is satisfied.

5.5 Comparison with Flesch readability scores

In advocating the texture index as an alternative to readability formulas, it is necessary to demonstrate that the texture index is not a proxy for readability formulas. The differences are demonstrated by comparing ranks based on indexical scores and readability scores reported in the illustrative empirical application in chapter 7. The benchmark readability score is the Flesch readability score. The selection of this particular readability score to serve as a benchmark for comparative purposes, is based on its prevalence in readability research (Courtis, 1998). Section 7.2.1 provides an overview of the Flesch readability formula and the process of text standardisation that is necessary to ensure comparability of scores. Appendix 5D reports the ranks for the individual indexicals, overall texture and Flesch readability scores. These ranks are computed from the data included in 7E (readability scores) and 7F (indexical scores). Spearman's rank-order correlation co-efficient is used to provide a correlation matrix for ranks by scores (Table 5.11).

Table 5.11
Correlation matrix for comparison of indexical scores with Flesch readability scores

	Overall Top'	Int'	Conj'	Conn'	Spec'	Sh'	Overall texture
Int'	0.356						
Conj'	0.299	0.010					
Conn'	0.243	0.195	0.352				
Spec'	0.215	-0.111	0.353	0.379			
Sh'	0.386	0.077	0.449	0.386	0.074		
Overall texture	0.515	0.396	0.665*	0.788*	0.585	0.466	
Flesch Readability	-0.029	0.005	-0.323	-0.077	-0.345	-0.004	-0.223

Note:
* Significant at 5 per cent confidence level; Spearman's rank-order correlation coefficient is used to provide a correlation matrix for ranks. The critical value for the Spearman rank-order correlation coefficient is 0.648 at 5 per cent confidence level for a 2-way test. The null hypothesis that there is no association is tested against the alternative hypothesis that there is association, either positive or negative (Siegel and Castellan, 1988, pp. 242 and 360).

The generality of the low correlation coefficients between each indexical and Flesch readability scores, provides a strong indication that the indexicals offer information about the text which is not captured in a readability score. Table 5.11 also correlates ranks across indexicals. This is discussed further in section 5.7.

5.6 Scope of texture analysis

Having demonstrated that the texture index is not a proxy for readability formulas (specifically the Flesch readability formula), this section provides an overview of the scope of texture analysis, indicating the potential for richer empirical analysis when compared, for example, with readability formulas.

The scoring sheet in Appendix 5C.3 illustrates the scope of texture analysis. For each t-unit, the information category is noted (Col. 2). Information categories appearing in bold type-face indicate a heading in the text. Changes in these information categories will be reflected by the indexical shift (Col. 15), although in texts where there are no headings or section breaks, changes in information categories are signalled less explicitly. Col. 3 codes the text for valence of news. Individual t-units were classified as either 'good news' ['G'], 'bad news' ['B'] or 'neutral' ['N'] when viewed from an investor perspective. Examples of 'good news' t-units were those discussing, for example, increases in profits, asset returns or dividends or strong market performance. By contrast, t-units discussing reduction in profits, asset returns or dividends or poor market conditions, were coded as 'bad news'. Those t-units which were not categorised as either 'good news' or 'bad news' were coded as neutral.

Cols. 4 – 10 relate to the indexical topicality. While the overall topicality score is recorded in Col. 10, Cols. 4 – 9 record more detailed information regarding the disclosure of main topics and supporting statements in the text. The main topics 'A' to 'E' (Cols. 4 – 8) are those identified in Table 5.2. Cols. 11 – 15 relate to the remaining indexicals. Finally, Col. 16 gives an overall texture score based on the sum of the component indexical scores in Cols. 10 – 15.

The layout of the scoring sheet indicates the potential for texture analysis, based both on the vertical summation of indexical scores and in relation to the horizontal patterns. In relation to the vertical summation, page 2 of Appendix 5C.3 shows overall scores for each indexical, the constituents of the indexical topicality and for overall texture. The

percentage of 'good news' / 'bad news' t-units is also computed. A detailed discussion of the computation and interpretation of indexical scores can be found in section 5.7.

There is also considerable potential for interesting analysis in the horizontal patterns. The unit by unit analysis allows the researcher to capture variability in the narrative. Courtis (1998, p. 469), argues that a measure of variability is a key requirement in testing for obfuscation. In this regard, an interesting question would be to consider whether variations in texture and particular patterns of texture are associated with 'good news' / 'bad news' disclosures. Other interesting questions would be to consider whether different information categories are associated with particular patterns of texture or whether different main topics (for example, 'forward-looking' information (main topic 'B')) are associated with particular patterns of texture.

The illustrative empirical application reported in chapter 7, exploits only the vertical summation of indexical scores. The intention of the application is to illustrate across the range of what is available rather than to provide an exhaustive empirical analysis.

In relation to the scope of the texture index, a particular dynamic of the approach is that it embraces both syntactic analysis and elements of meaning-oriented thematic analysis in a single approach. This allows the researcher to move towards an holistic approach to text evaluation. This matter is discussed further in section 8.6. Table 5.12 summarises the scope of the texture index in this regard.

Table 5.12
Scope of texture index

Syntactic analysis	**Thematic analysis** *(meaning-oriented)*
Intertextuality	Topicality
Conjunction	Shift
Connectivity	Situationality
Specificity	

5.7 Interpreting indexical scores

As already indicated in section 5.3.2, indexical scores for a particular text are expressed as a percentage of the maximum possible score. For the text included in Appendix 5C, which is analysed into 47 t-units, the maximum score for all the indexicals, with the exception of shift, is 94 (being 47 t-units scoring '2'). For the indexical shift, the maximum score for each t-unit is '1' and hence the maximum score for 'shift' would be 47 (47 t-units scoring '1'). It should be noted that, strictly, since the first t-unit in a text cannot score either for connectivity or shift, the maximum indexical score should be adjusted accordingly. In relation to the example in Appendix 5C, the maximum scores would be 92 and 46. Following Roseberry, however, it has been decided to apply an identical principle for calculating the maximum score for all indexicals and therefore no adjustment for connectivity and shift has been made. This does not affect the results in an empirical application since comparison is made on a like by like basis between different texts. The overall texture score is computed in a similar way and is, therefore, based on a maximum score for each t-unit of 11. Finally, it should be noted that the scores for the different main topics ('A' – 'E') and supporting statements are simply disclosure indices, where '1' denotes the presence of the main topic or supporting statement as appropriate.

In relation to the interpretation of the vertical summation of indexical scores, while it might be surmised that the higher the overall texture score the better, the low correlation coefficients between indexicals (Table 5.11), make it difficult at this stage to attach an interpretation to the arithmetic total summed across indexicals. Each indexical could be regarded as indicating a separate aspect of managerial intention in drafting the narrative. Investigating the combined impact of such intention is a fruitful but separate research project which would consider user response to each characteristic represented by the indexicals, with a view to weighting indexicals for cross-summation. A related question would be to consider whether there is a 'desirable' level of texture in the Chairman's statement and whether there is a 'desirable' level of texture for each of the indexicals. Answering these questions would also require direct reader involvement, in order to evaluate the relative texture in the context of user perceptions of the narrative. These issues are beyond the scope of this study and are discussed further in relation to directions for further research (section 8.3.2). It is worth noting at this point, that the research designs employed in the empirical application reported in chapter 7 is concerned with investigating differences in indexical scores between 'good performers'

and 'poor performers'. Benchmarks for indexical scores are not central to such an analysis.

5.8 Sensitivity analysis

The use of the categorical scores '2', '1', '0' is justified by reliance on Roseberry, but it is interesting to test the robustness of these categories when aggregated. Accordingly, sums of squares were also computed (i.e. scores of '4', '1', '0'). The ranks based on sums of squares are included as Appendix 5E. The rank correlation of scores based on sums and those based on sums of squares was found to be very high, although not perfect (Table 5.13).

Table 5.13
Sensitivity analysis

	Overall Top'	Int'	Conj'	Conn'	Spec'	Sh'	Overall texture
Correlation coefficient	1.00	0.842	0.975	0.937	0.987	1.00	0.933

Note: Sensitivity analysis compares ranks based on arithmetic sums with scores based on sums of squares.

5.9 Satisfaction of assessment criteria: validity and reliability

The framework of assessment criteria identified in section 2.4 and Table 2.1 was identified as an appropriate referent both for the critique of existing methods and for the development of new methods. If the texture index is to be used by accounting researchers in empirical studies, it is necessary that is satisfies these criteria. This requirement is reflected in the primary research question 1.4 (see Table 4.1 for an overall synthesis of research questions and Table 2.2 for the origin of this particular question). The specified assessment criteria are validity and reliability.

Validity is assessed in terms of face validity and external validity. Face validity is the fundamental validating criterion. A category has face validity if it measures the construct it purports to measure. It has been demonstrated in this chapter, elaborated in terms of a detailed theoretical justification of the approach, that the texture index measures what it purports to measure, namely texture. A core element of texture is the whole-text dimension that is critical to effective texture communicating and that readability formulas are unable to capture. The whole-text approach has been addressed through the indexicals: intertextuality, conjunction, connectivity, specificity and shift in

information category, which in turn draw on standards established in the theory of linguistics. Linguists regard moving beyond word- or sentence-level features to a consideration of how sentences (t-units) are linked together in texts as fundamental to text evaluation.

A further strength of the texture index when compared to readability formulas relates to the appropriateness of the method for the investigation of accounting narratives. Readability scores originated in the assessment of children's writing and have been used as a measurement of complexity in accounting applications typically without refinement or qualification. Roseberry's methodology is developed with particular relevance to business applications, thus enhancing face validity. Moreover, the generic-specific dynamic of the approach allows the specific adaptation to a particular type of narrative within the sphere of what might be considered a business application. This further enhances face validity. The illustration in this chapter, based on the AITC Guide, has shown that features deemed essential by the AITC can be matched to the general definitions for each indexical and that working rules can be developed which allow replication.

An aspect of this focusing of the model to enhance face validity is the incorporation of reader or user-insights in the development of the approach. User-involvement has been met at the theoretical level by the user-centred aspects of de Beaugrande and Dressler's standards. Roseberry's model is based on these standards and, therefore, in addressing user-centred aspects, the involvement of the reader is integral to the methodology. The indexicals topicality and intertextuality address reader involvement. The application chosen for illustration is the Chairman's statement of investment trust companies. The rules for scoring texture are constructed on an industry specific statement of best practice for narrative reporting. This statement is itself the result of extensive consultation with users and preparers.

Although some preliminary links have been established in this chapter through the overview of the texture index in section 5.3 (and relevant sub-sections), the further step of linking texture and the constructs captured by the component indexicals with impression management is difficult to establish definitively at this stage, given that the approach is new to the accounting domain. Some further reflections on this will be offered in the context of the empirical application in this study (see sections 7.7.2 and 7.10), although a more extensive body of empirical evidence will be necessary in order

to make any definitive claims in this regard (section 8.3.2). At this stage, it would be appropriate to suggest a tentative link between the constructs embraced by the texture index and obfuscation, a term typically associated with readability, which has become established within an impression management theory in accounting (section 3.4.1). Moreover, those aspects of the texture index which fall within the domain of meaning-oriented thematic analysis (section 5.6 and Table 5.12), in particular topicality, suggest a link with impression management, given their resemblance to constructs embraced by existing meaning-oriented approaches in the accounting literature, where that link has been established.

The strength of face validity is also dependent on the objectivity of the coding method and correct measurement specification. Given that the texture index employs a manual coding approach, a degree of subjectivity is acknowledged. In order to address this issue and ensure that an acceptable degree of objectivity and thus validity is attained, detailed decision rules have been developed for each indexical. A particular feature of these rules is the categorical scoring approach of '2', '1' or '0' (section 5.3.2). Face validity is stronger when human inferences require only nominal coding. The detailed practical illustration presented in this chapter, along with the empirical application reported in chapter 7, have demonstrated these rules through application. Reference was made in section 2.5.2 to Milne and Adler (1999) who explored in some detail the issue of inter-coder reliability in manual analysis. Through an experimental study, they observed a high degree of inter-coder reliability when using a sentence-based coding instrument with detailed decision rules. The texture index embraces a similar approach – a t-unit analysis with detailed decision rules in a categorical framework. While a sufficient degree of objectivity has been demonstrated to move forward, further research might consider the use of computerised coding for aspects of the texture index, as a means of enhancing objectivity (section 8.3.2).

It is recognised that a particular weakness of this study is the lack of demonstrated inter-coder reliability, given that the analysis was carried out solely by the author. This was considered necessary given the parameters of the present study. In relation to the empirical contribution of the study, which is a secondary contribution, this factor is considered acceptable as an acknowledged limitation. The application of the texture index to the OFR in Sydserff and Weetman (1999) used two coders. A high degree of inter-coder reliability was observed based on decision rules, which closely mirrored those described in this chapter. Differences arise from the adaptability of the rules to

the particular narrative under investigation. Issues of validity in relation to the development of rules specifically with regard to the investigation of the Chairman's statement of investment trust companies have been addressed by using the AITC Guide as a basis for the development of rules (which itself is the result of an extensive process of collaborative discussion) and by discussion and review with the Chairman of the AITC working party responsible for the preparation of the Guide, an expert in the investment trust sector.

Turning to external validity, section 2.5.1 highlighted population validity as particularly problematic in relation to readability formulas. Population validity concerns generalisability and appropriateness across different populations. The issues discussed above are relevant here. Readability scores as yardsticks for interpretation were developed in a pedagogic context to assess children's writing. Generalisability and appropriateness to accounting narratives and accounting populations is problematic. With the texture index, the degree to which the development is adult-focused and accounting-oriented renders this issue less problematic. What would be problematic is using the texture index as developed in this study in a pedagogic context to assess children's writing.

In relation to the other criteria for external validity, construct validity is difficult to gauge. This is particularly so, given the methodological weaknesses of the obvious alternative, readability formulas, and the significantly increased scope of the texture index in comparison. Hypothesis validity, concerned with the relationship between hypothesised constructs and theory, is similar to face validity. It has been argued above that the indexicals, which can be considered as hypothesised constructs, bear close relation to the underlying theory of textual communication. A further dimension on hypothesis validity will be explored in the empirical application in chapter 7, when texture and the components of texture will be explored in the context of impression management theory (see sections 7.7.2 and 7.10). Predictive validity is a matter for further research. For example, section 8.4 reflects on the potential for using the texture index, along with the other methods developed in this study, for bankruptcy prediction (see also, section 8.3.2). Finally, in relation to ecological validity, which is concerned with the generalisability of results over times and settings, the general-specific model, which is central to the texture index is both a strength and a weakness. In terms of face validity as the fundamental validating criterion, the strength of the approach is its adaptability to the particular circumstances of application. Generalising results in

relation to studies investigating similar narratives would be appropriate, since a similar model would be used. Comparing studies investigating different narratives would be more problematic. In relation to the time dimension, factors such as the issue of regulatory guidance would be important. For example, results based on the investigative model for the OFR used by Sydserff and Weetman (1999) would not be directly comparable with results based on an investigative model that had been developed in light of amended regulations.

It is recognised that satisfying validity concerns is not sufficient. The issue of reliability is also important. Reliability is concerned with the ability to replicate results, assessed in terms of stability and reproducibility. Stability is concerned with the degree of variance in coding over time; reproducibility, with the degree of correlation, for example, between multiple coders using the same text. Much of the discussion above in relation to validity embraces these issues. This is because objectivity underlies both validity and reliability. Stability is largely a matter for further research (section 8.3.2). This study's principal concern is the establishment of the texture index in the accounting domain. While reproducibility has not been demonstrated in this study, the detailed decision rules developed provide strong support for the view that issues associated with reproducibility can be contained.

To summarise, as a research instrument, the texture index is time consuming and complex. This is in marked contrast to computer-based readability formulas, whose ease of use and relative simplicity is a particularly strong feature. The acceptability of the texture index in the accounting domain, is dependent on its validity, its reliability and its ability to offer to the accounting researcher fresh insights and a breadth of scope not embraced by existing approaches. A feature of the texture index is strength in face validity, in particular, through its embracing of whole-text aspects. Reliability, and objectivity as an all-embracing dimension, are sufficient to move forward. In terms of scope, the texture index offers a wealth of fresh insights to the accounting researcher.

5.10 Summary and conclusions

This chapter has developed for use in accounting applications, a texture index or indexical approach, as an alternative to text-focused readability formulas. The approach is developed in response to a specific call in the literature for methodological development in this regard. Jones and Shoemaker (1994) called for methodological research to advance the readability literature. Courtis (1998, p. 469) offered the specific

challenge to readability researchers of identifying a defensible, reliable, representative measure of readability which takes account of variability. This study has responded by proposing an alternative text-focused scoring approach, which encompasses aspects of readability not addressed by readability formulas and takes account of variability. The texture index has a sound theoretical and practical basis in the linguistics literature, satisfies the recognised assessment criteria in the accounting literature for methodological development and measures factors not captured by readability formulas. In light of the expressed intention in this study, to develop methods with a view to investigating impression management, the approach gives rise to reliable dependent variables, which can be used in tests of association and tests of differentiation. Finally, in response to a general line of criticism in the literature, the approach goes some way towards redressing the lack of emphasis on the syntactic dimension, exhibited in the existing portfolio of approaches.

The further step of applying the methodology in an accounting environment has been illustrated in this chapter with a sample text and is developed further in chapters 7, through an illustrative empirical application.

Appendix 5A
Texture index
Sections included in the investment trust company annual report
[based on empirical sample reported in chapters 7]

Section of report / Trust Id:	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
Contents	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Company summary	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Year's summary	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Chairman's statement	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Manager's report	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓
Ten year / long term record	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓		✓	✓	✓	✓	✓			✓	✓	✓	✓		✓
Directors' report	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Key:

✓ Extensive disclosure in relation to the particular section of the annual report identified.
✓ Limited disclosure in relation to the particular section of the annual report identified.
[Blank space indicates absence of relevant section of report [Note: the annual report for trust 'Y' did not include a Manager's report]]

Section of report / Trust Id:	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
Directors' report on corporate governance	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Auditors' report on governance	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Statement of Directors' responsibilities	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Auditors' report	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Statement of total return	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Balance sheet	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Cash flow statement	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Accounting policies and notes	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Key:

✓ Extensive disclosure in relation to the particular section of the annual report identified.
✓ Limited disclosure in relation to the particular section of the annual report identified.
[Blank space indicates absence of relevant section of report [Note: the annual report for trust 'Y' did not include a Manager's report]]

Trust Id: / **Section of report**	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
Glossary of investment trust technical terms					✓												✓				✓					
Shareholder information	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Notice of annual general meeting	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Risk review			✓																							
Strategy review																					✓					
Capital structure history																								✓		

Key:

✓ Extensive disclosure in relation to the particular section of the annual report identified.
✓ Limited disclosure in relation to the particular section of the annual report identified.
[Blank space indicates absence of relevant section of report [Note: the annual report for trust 'Y' did not include a Manager's report]]

Appendix 5B
Texture index
Taxonomy of conjunctive markers found in the Chairman's statement
[based on empirical sample reported in chapters 7]

5B.1: Causative markers

Examples of causative markers found in the Chairman's statement include:

accentuated
accordingly (meaning "and, as a result")
affected / affected by
allowing
and (meaning "and, as a result")
and consequently
arose / arising from (meaning "is explained by")
as (meaning "as a result (of)")
as (meaning "because (of)")
as a means of
as a result of
attracts / attracted
avoids
based on
because
because of
benefited / benefiting from
boosts / boosted by
buoyed by
can be explained by
captured by
caused / caused by
characterised by
consequently
contributed to
dampen / dampened by
delivered / delivered by
demonstrating / this demonstrates
depends upon
driven by
due to
enabling / enabled by
enhancing / enhanced by / to enhance
ensured
entailing / this entails
for this reason
from participation in
giving (meaning "resulting in")
giving rise to
had the effect of
helped / helped to
highlighted
impacted upon / have an impact upon

improve
in accordance with
in light of
in order to
in view of
increased
influencing / influenced by
is likely to
led to / will lead to / leading to
lifting
magnified the impact of
making
necessitates / which necessitates
outperformed
outstripped
provide / provided by
producing / produced by
raise
realised
reducing / has reduced
reflecting / to reflect / reflected by
representing / represented by / this represents
requiring a
resulted in / resulting in
should (meaning "should result in")
showing
since
therefore (indicating a cause / effect relationship)
this has made
this has the effect of
this means that
thus (meaning "therefore")
this reflects (meaning "is explained by")
through
to authorise
to provide
to raise
to take advantage of
triggering / triggered by
which allows / produces / results in
will deliver / produce / result in
with a view to
with the result that

5B.2: Adversative markers

Examples of adversative markers found in the Chairman's statement include:

against a background of / this background
adjusting for the effect of
after (meaning "after adjusting for" or "after taking account of")
although
as against
against these trends
against (a) / (thus) (meaning "in comparison with (to)")
as a corollary
based on
better than (with a comparative meaning)
but
but rather
by contrast / by marked contrast
compared with / compared to / this compares to / which compares (to / with)
contrary to expectation
despite
even after
even if
exceeding
greater than
however
instead
in contrast / in marked contrast
in excess of (with a comparative meaning)
in line with (with a comparative meaning)
in spite of
is likely to
less than
lesser than
nevertheless
notwithstanding (this)
more than
offset by
offset the impact of
only
over (with a comparative meaning)
rather (than)
relative to (with a comparative meaning)
similar to
subject to
tempered by
than that of (meaning "when compared with")
the comparative performance
therefore (qualifying a previous statement)
whereas
while (meaning "but")
while (meaning "while compared to")
whilst

with the exception of
with this in mind
yet

5B.3: Additive markers

Examples of additive markers found in the Chairman's statement include:

a further
a key indicator of
also
and (meaning "and, in addition")
and (meaning "and, in this regard")
and also
and therefore
as mentioned above
as part of (a)
as well as
at the same time
based on
both…and
equally
estimated at
for example / a good example of this / a particular example of this
first…second…third (specific restatement of information previously given)
further / furthermore
heightened by
in addition
in conjunction with
in this connection
in this regard
in other words
in particular / particularly those
in total
include / including / including a contribution from / and include
indeed
it is even more pleasing to note
moreover
namely
one affect…another affect…
one reason…another reason…
overall (in the context of summing up)
reflect (meaning "comprises")
representing / represented by
such as
that is to say (with an exemplificatory meaning)
the net effect was…
therefore (restatement of information previously given)
when added to
when coupled with
when viewed in combination with
whether or not
which includes
while (meaning "on the one hand…on the other hand")

Appendix 5C
Practical illustration of application of texture index

5C.1 Text of Chairman's statement with t-units identified [Trust Id. 'D' (Appendix 7A)]

[*t1* Your Company has been the best performing Smaller Companies Investment Trust over both one and three years.]

[***t2*** The past year has been an exceptional period for your Company.] [***t3*** Not only did our chosen market, AiM, prove to be the best performing part of the UK stock market, posting a gain in the year of 168.1%, but the underlying net asset value of [Name] outperformed even this by a huge margin of 141.4%.] [***t4*** This has resulted in a growth of net asset value per share of 309.5% during the year.] [***t5*** From an investor's point of view, it is even more pleasing to report that the share price has increased from 68 pence to 308.5 pence, an increase of 353.7% over the period.] [***t6*** This has made your Company the best performing Smaller Companies Investment Trust over the past twelve months and, more importantly, the past three years.] [***t7*** This performance has been recognised by the market] [***t8*** and your Company has won a number of awards.]

[***t9*** The turnaround over the past year has been remarkable] [***t10*** and it is hard to believe writing this report just how much things have changed.] [***t11*** Since the launch of the Company, asset value has grown by 288.9% which was 232.4% better than the FTSE All-Share Index thus rewarding the shareholders who supported the Company when AiM had not proven itself.]

Earnings and Dividends

[***t12*** It has not been possible to achieve the asset growth whilst maintaining earnings.] [***t13*** Earnings per share fell from 1.15 pence per share in 1999 to 0.17 pence.] [***t14*** As a result, it is proposed that a dividend is not paid this year] [***t15*** whereas last year we paid 0.90 pence per share.]

[***t16*** The reduction in earnings is due to a number of factors.] [***t17*** A substantial part of the reduction was due to income from securities falling from £1.08 million to £0.81 million] [***t18*** as the Managers switched the portfolio from higher yielding stocks towards high growth technology stocks which were very low yielding.] [***t19*** In addition, the increase in asset value resulted in an increased management fee charged to Revenue] [***t20*** and the loan stock taken on in June 1998 attracted a full year's interest.]

Share Buy Back

[***t21*** During the year, we exercised our powers to buy back the Company's shares for cancellation.] [***t22*** A total of 3,488,549 shares were purchased during the year at a cost of £3,969,000 being an average price per share of 113.8 pence.] [***t23*** Overall the impact of this buy-back (ignoring the gains which could have been made on the funds

had they been invested in the market) increased net asset value per share by 21.2 pence.] [*t24* This demonstrates the benefits of using the buy-back facility to enhance shareholder value.]

Management of the portfolio

[*t25* Our Investment Managers have positioned the Company's assets extremely well to take advantage of growth opportunities.] [*t26* They took a decision some 12 to 18 months ago to target technology companies whether in the medical, computer software or emerging Internet areas.] [*t27* I am pleased that our approach to the Internet has been described as the Klondike approach.] [*t28* Rather than seek to mine the dot.com companies, the Managers have sought out the stocks selling the picks and shovels.] [*t29* The process has reduced the risk inherent in Internet stocks whilst capturing significant upside.]

[*t30* Your Managers have also demonstrated considerable skill at maximising returns from the portfolio.] [*t31* Based on their risk-reward analysis they have been prepared to run some winners to extract the return, commensurate with the initial risk taken.] [*t32* A good example of this was [Name] which on its sale after the year-end generated profits of £43.1 million on a cost of £1.6 million.]

[*t33* Your Board has been supportive of this approach and point out some of the many other successes such as [Name], [Name], [Name] and [Name] all of which have performed exceptionally well.] [*t34* Indeed, even if the huge success represented by [Name] were to be excluded from the portfolio, the Company would still have been the best performing Smaller Companies Trust.]

Shareholder Base

[*t35* In January 1999, the shareholder base of the Company was 99% institutional with a very small private investor exposure.] [*t36* Your Board was particularly keen to increase the number of private investors and sought ideas to achieve this.] [*t37* We rejected supporting the AITC 'its' campaign] [*t38* as we felt that it was unlikely that a generic advertising campaign would benefit our specialist Trust.] [*t39* Instead, we launched our [Name] and [Name] plans and concentrated marketing on the private client broker market and sought positive press comment.]

[*t40* I am delighted that the private investor interest in the Company has now grown to some 20%] [*t41* and I am delighted to welcome all new shareholders to the Company.]

Awards

[*t42* As mentioned above, your Company has recently won a number of awards.] [*t43* These have all been in the Best Smaller Companies Investment Trust sector and include such prestigious awards as [Name], [Name] and [Name].]

Prospects

[*t44* The past year has been very good] [*t45* and I am pleased that the current year has also got off to a good start with net asset value per share increasing a further 39.6% to 529.8 pence.] [***t46*** Your Managers will continue to adopt their calculated approach supporting dynamic growth companies.] [*t47* I believe that over the long term this will deliver further good returns to shareholders.]

5C.2 Explanation of analysis by t-unit [Trust Id. 'D' (Appendix 5C.1)]

t-unit	*Indexical*	*Score*	*Text and comment*
t1			***Your Company has been the best performing Smaller Companies Investment Trust over both one and three years.*** **[bold in text]**
	Top'	2	Main topic 'D'. Performance comparison with industry sector. Also, performance comparison over time ("over…three years").
	Int'	1	Implicit intertextual reference to 'Year's summary'. [Also, implicit intertextual reference to published comparative performance statistics.]
	Conj'	0	No conjunction.
	Conn'	0	The first t-unit cannot score for connectivity.
	Spec'	2	Highly specific.
	Sh'	0	The first t-unit cannot score for shift.
	Overall	**5**	
t2			*The past year has been an exceptional period for your Company.*
	Top'	1	Supporting statement. No indication of a defined main topic.
	Int'	0	No intertextual reference.
	Conj'	0	No conjunction.
	Conn'	2	Strong connectivity. The phrase "your Company" creates an explicit link with the previous t-unit ("your Company").
	Spec'	0	Focus predominantly on generalities.
	Sh'	1	No change in information category.
	Overall	**4**	
t3			*Not only did our chosen market, AiM, prove to be the best performing part of the UK stock market, posting a gain in the year of 168.1%, but the underlying net asset value of [Name] outperformed even this by a huge margin of 141.4%.*
	Top'	2	Main topic 'A'. Performance of AiM affects results. Main topic 'C'. Explanation of ratios. Main topic 'D'. Performance comparison against market trend (AiM).
	Int'	1	Implicit intertextual reference to 'Year's summary' / 'Balance sheet' / 'Accounting policies and notes'.
	Conj'	2	Adversative conjunction (marker – "but").
	Conn'	1	Weak connectivity. The phrase "best performing" creates an explicit link with an earlier t-unit other than the previous t-unit ("best performing" in *t1*).
	Spec'	2	Highly specific.
	Sh'	1	No change in information category.
	Overall	**9**	
t4			*This has resulted in a growth of net asset value per share of 309.5% during the year.*
	Top'	2	Main topic 'C'. Explanation of ratios.
	Int'	1	Implicit intertextual reference to 'Year's summary' / 'Balance sheet' / 'Accounting policies and notes'.
	Conj'	2	Causal conjunction (marker – "resulted in").
	Conn'	2	Strong connectivity. The phrase "net asset value" creates an explicit link with the previous t-unit ("net asset value").
	Spec'	2	Highly specific.
	Sh'	1	No change in information category.
	Overall	**10**	

t-unit	*Indexical*	*Score*	*Text and comment*
t5			*From an investor's point of view, it is even more pleasing to report that the share price has increased from 68 pence to 308.5 pence, an increase of 353.7% over the period.*
	Top'	2	Main topic 'C'. Explanation of ratios.
	Int'	1	Implicit intertextual reference to 'Year's summary' / 'Balance sheet' / 'Accounting policies and notes'.
	Conj'	1	Additive conjunction (marker – "it is even more pleasing to report").
	Conn'	0	No connectivity.
	Spec'	2	Highly specific.
	Sh'	1	No change in information category.
	Overall	**7**	
t6			*This has made your Company the best performing Smaller Companies Investment Trust over the past twelve months and, more importantly, the past three years.*
	Top'	2	Main topic 'D'. Performance comparison with industry sector. Also, performance comparison over time ("the past three years").
	Int'	1	Implicit intertextual reference to 'Year's summary'. Also, implicit intertextual reference to published comparative performance statistics.
	Conj'	2	Causal conjunction (marker – "[t]his has made").
	Conn'	1	Weak connectivity. The phrase "best performing" creates an explicit link with a t-unit other than the previous t-unit ("best performing" in *t3*). [N.B. the entire t-unit creates an explicit link with an earlier t-unit other than the previous t-unit (*t1*), although in terms of scoring for connectivity, that link is superceded by the link with *t-3*.]
	Spec'	2	Highly specific.
	Sh'	1	No change in information category.
	Overall	**9**	
t7			*This performance has been recognised by the market* [N.B. *t7* and *t8* are treated as separate t-units even though they appear as a single sentence in the text. They are treated separately because they are two units of narrative each of which satisfies the definition of a unit (one independent clause with all subordinate clauses attached to it) joined by the conjunction "and". See section 5.3.1 for explanation.]
	Top'	2	Main topic 'D'. Performance comparison with industry sector.
	Int'	0	No intertextual reference.
	Conj'	0	No conjunction.
	Conn'	2	Strong connectivity. The phrase "This performance" creates an explicit link with the previous t-unit ("best performing").
	Spec'	0	Focus predominantly on generalities.
	Sh'	1	No change in information category.
	Overall	**5**	
t8			*and your Company has won a number of awards.* [N.B. See comment at *t7* above.]
	Top'	2	Main topic 'D'. Performance comparison with industry sector.
	Int'	0	No intertextual reference.
	Conj'	2	Causal conjunction (marker – "and" (meaning "and, as a result")).
	Conn'	1	Weak connectivity. The phrase "your company" creates an explicit link with an earlier t-unit other than the previous t-unit ("your Company" in *t6*).

t-unit	*Indexical*	*Score*	*Text and comment*
	Spec'	0	Focus predominantly on generalities.
	Sh'	1	No change in information category.
	Overall	**6**	
t9			*The turnaround over the past year has been remarkable* [N.B. *t9* and *t10* are treated as separate t-units even though they appear as a single sentence in the text. They are treated separately because they are two units of narrative each of which satisfies the definition of a unit (one independent clause with all subordinate clauses attached to it) joined by the conjunction "and". See section 5.3.1 for explanation.]
	Top'	1	Supporting statement. No indication of a defined main topic.
	Int'	0	No intertextual reference.
	Conj'	0	No conjunction.
	Conn'	0	No connectivity.
	Spec'	0	Focus predominantly on generalities.
	Sh'	1	No change in information category.
	Overall	**2**	
t10			*and it is hard to believe writing this report just how much things have changed.* [N.B. See comment at *t9* above.]
	Top'	1	Supporting statement. No indication of a defined main topic.
	Int'	0	No intertextual reference.
	Conj'	0	No conjunction.
	Conn'	1	Weak connectivity. The phrase "how much things have changes" creates an implicit link with the previous t-unit ("The turnaround over the past year").
	Spec'	0	Focus predominantly on generalities.
	Sh'	1	No change in information category.
	Overall	**3**	
t11			*Since the launch of the Company, asset value has grown by 288.9% which was 232.4% better than the FTSE All-Share Index thus rewarding the shareholders who supported the Company when AiM had not proven itself.*
	Top'	2	Main topic 'C'. Explanation of ratios. Main topic 'D'. Performance comparison against market trend (FTSE-All-Share Index). Also, performance comparison over time ("[s]ince the launch of the company").
	Int'	1	Implicit intertextual reference to 'Long-term record'.
	Conj'	2	Adversative conjunction (marker – "better than" (with a comparative meaning)).
	Conn'	1	Weak connectivity. The phrase "the Company" creates an explicit link to an earlier t-unit other than the previous t-unit ("your Company" in *t8*).
	Spec'	2	Highly specific.
	Sh'	1	No change in information category.
	Overall	**9**	

t-unit	*Indexical*	*Score*	*Text and comment*
t12			***Earnings and Dividends*** *It has not been possible to achieve the asset growth whilst maintaining earnings.*
	Top'	2	Main topic 'D'. Performance comparison with prior accounting period (signalled by "whilst maintaining"). Main topic 'E'. Commentary on dividends and earnings.
	Int'	0	No intertextual reference.
	Conj'	0	No conjunction.
	Conn'	2	Strong connectivity. The phrase "the asset growth" creates an explicit link with the previous t-unit ("asset value has grown").
	Spec'	0	Focus predominantly on generalities.
	Sh'	0	Information category changes from "performance" to "earnings and dividends".
	Overall	**4**	
t13			*Earnings per share fell from 1.15 pence per share in 1999 to 0.17 pence.*
	Top'	2	Main topic 'C'. Explanation of ratios. Main topic 'D'. Performance comparison with prior accounting period. Main topic 'E'. Commentary on dividends and earnings.
	Int'	1	Implicit intertextual reference to 'Year's summary' / 'Statement of total return' / 'Accounting policies and notes'.
	Conj'	0	No conjunction.
	Conn'	2	Strong connectivity. The word "Earnings" creates an explicit link with the previous t-unit ("[E/e]arnings").
	Spec'	2	Highly specific.
	Sh'	1	No change in information category.
	Overall	**8**	
t14			*As a result, it is proposed that a dividend is not paid this year* [N.B. *t14* and *t15* are treated as separate t-units even though they appear as a single sentence in the text. They are treated separately because they are two units of narrative each of which satisfies the definition of a unit (one independent clause with all subordinate clauses attached to it) joined by the conjunction "whereas". See section 5.3.1 for explanation.]
	Top'	2	Main topic 'E'. Commentary on dividends and earnings.
	Int'	1	Implicit intertextual reference to 'Directors' report' / 'Statement of total return' / 'Accounting policies and notes'.
	Conj'	2	Causal conjunction (marker – "[a]s a result").
	Conn'	1	Weak connectivity. The word "dividends" creates an explicit link to an earlier t-unit other than the previous t-unit ("Dividends" in *t12*).
	Spec'	2	Highly specific.
	Sh'	1	No change in information category.
	Overall	**9**	
t15			*whereas last year we paid 0.90 pence per share.* [N.B. See comment at *t14* above.]
	Top'	2	Main topic 'D'. Performance comparison with prior accounting period. Main topic 'E'. Commentary on dividends and earnings.
	Int'	1	Implicit intertextual reference to 'Directors' report' / 'Statement of total return' / 'Accounting policies and notes'.
	Conj'	2	Adversative conjunction (marker – "whereas").
	Conn'	1	Weak connectivity. The phrase "last year" creates an implicit link to the previous t-unit ("this year").

t-unit	*Indexical*	*Score*	*Text and comment*
	Spec'	2	Highly specific.
	Sh'	1	No change in information category.
	Overall	**9**	
t16			*The reduction in earnings is due to a number of factors.*
	Top'	2	Main topic 'D'. Performance comparison with prior accounting period. Main topic 'E'. Commentary on dividends and earnings.
	Int'	0	No intertextual reference.
	Conj'	0	No conjunction.
	Conn'	1	Weak connectivity. The word "earnings" creates an explicit link to an earlier t-unit other than the previous t-unit ("Earnings" in *t13*).
	Spec'	0	Focus predominantly on generalities.
	Sh'	1	No change in information category.
	Overall	**4**	
t17			*A substantial part of the reduction was due to income from securities falling from £1.08 million to £0.81 million* [N.B. *t17* and *t18* are treated as separate t-units even though they appear as a single sentence in the text. They are treated separately because they are two units of narrative each of which satisfies the definition of a unit (one independent clause with all subordinate clauses attached to it) joined by the conjunction "as". See section 5.3.1 for explanation.]
	Top'	2	Main topic 'A'. Reduction in income from securities affects results. Main topic 'D'. Performance comparison with prior accounting period. Main topic 'E'. Commentary on dividends and earnings.
	Int'	1	Implicit intertextual reference to 'Accounting policies and notes'.
	Conj'	2	Causal conjunction (marker – "was due to").
	Conn'	2	Strong connectivity. The phrase "the reduction" creates an explicit link with the previous t-unit ("The reduction").
	Spec'	1	The phrase "a substantial part of the reduction" signals partial quantification.
	Sh'	1	No change in information category.
	Overall	**9**	
t18			*as the Managers switched the portfolio from higher yielding stocks towards high growth technology stocks which were very low yielding.* [N.B. See comment at *t17* above.]
	Top'	2	Main topic 'A'. Manager's performance affects results. Main topic 'E'. Commentary on dividends and earnings.
	Int'	1	Implicit intertextual reference to Manager's report and portfolio analysis (signalled by "as the Managers switched the portfolio").
	Conj'	2	Causal conjunction (marker – "as" (meaning "because")).
	Conn'	0	No connectivity.
	Spec'	2	Highly specific (statement of investment policy).
	Sh'	1	No change in information category.
	Overall	**8**	

t-unit	*Indexical*	*Score*	*Text and comment*
t19			*In addition, the increase in asset value resulted in an increased management fee charged to Revenue* [N.B. *t19* and *t20* are treated as separate t-units even though they appear as a single sentence in the text. They are treated separately because they are two units of narrative each of which satisfies the definition of a unit (one independent clause with all subordinate clauses attached to it) joined by the conjunction "and". See section 5.3.1 for explanation.]
	Top'	2	Main topic 'A'. Loan stock bearing full year's interest affects results. Main topic 'D'. Performance comparison with prior accounting period. Main topic 'E'. Commentary on dividends and earnings.
	Int'	1	Implicit intertextual reference to 'Statement of total return' / 'Accounting policies and notes' (signalled by "increased management fee charged to Revenue").
	Conj'	2	Causal conjunction (marker – "resulted in"). Although the marker "[i]n addition" signals additive conjunction, the presence of a causal marker scores '2' for the t-unit.
	Conn'	1	Weak connectivity. The phrase "increase in asset value" creates an explicit link with an earlier t-unit other than the previous t-unit ("the asset growth" in *t12*).
	Spec'	1	Mixture of general and specific. Increased management fee identified as a specific reason for increase in asset value, although extent of increase not quantified.
	Sh'	1	No change in information category.
	Overall	**8**	
t20			*and the loan stock taken on in June 1998 attracted a full year's interest.* [N.B. See comment at *t19* above.]
	Top'	2	Main topic 'A'. Loan stock bearing a full year's interest affects results. Main topic 'D'. Performance comparison with prior accounting period. Main topic 'E'. Commentary on dividends and earnings.
	Int'	1	Implicit intertextual reference to 'Statement of total return' / 'Accounting policies and notes' (signalled by "loan stock…attracted a full year's interest").
	Conj'	1	Additive conjunctive (maker – "and" (meaning "and, in addition")).
	Conn'	0	No connectivity.
	Spec'	1	Mixture of general and specific. Loan stock bearing a full year's interest identified as a specific reason for increase in asset value, although extent of increase not quantified.
	Sh'	1	No change in information category.
	Overall	**6**	
t21			***Share buy-backs*** *During the year, we exercised our powers to buy back the Company's shares for cancellation.*
	Top'	2	Main topic 'A'. Share buy-back affects results.
	Int'	1	Implicit intertextual reference to 'Directors' report' / 'Balance sheet' / 'Accounting policies and notes' (signalled by "buy back the Company's shares for cancellation").
	Conj'	0	No conjunction.
	Conn'	0	No connectivity.
	Spec'	1	Mixture of general and specific. Exercise of power to buy-back shares specifically identified, but extent of buy-back not quantified.
	Sh'	0	Information category changes from "earnings and dividends" to "share buy-backs".
	Overall	**4**	

t-unit	*Indexical*	*Score*	*Text and comment*
t22			*A total of 3,488,549 shares were purchased during the year at a cost of £3,969,000 being an average price per share of 113.8 pence.*
	Top'	2	Main topic 'A'. Share buy-back affects results. Main topic 'C'. Explanation of ratios.
	Int'	1	Implicit intertextual reference to 'Directors' report' / 'Balance sheet' / 'Accounting policies and notes' (signalled by "buy back the Company's shares for cancellation").
	Conj'	0	No conjunction.
	Conn'	1	Weak connectivity. The phrase "shares were purchased" creates an implicit link with the previous t-unit ("buy back the Company's shares").
	Spec'	2	Highly specific.
	Sh'	1	No change in information category.
	Overall	**7**	
t23			*Overall the impact of this buy-back (ignoring the gains which could have been made on the funds had they been invested in the market) increased net asset value per share by 21.2 pence.*
	Top'	2	Main topic 'A'. Share buy-back affects results. Main topic 'C'. Explanation of ratios.
	Int'	1	Implicit intertextual reference to 'Directors' report' / 'Balance sheet' / 'Accounting policies and notes'.
	Conj'	2	Causal conjunction (marker – "increased"). Although the marker "[o]verall" signals additive conjunction, the presence of a causal marker scores '2' for the t-unit.
	Conn'	1	Weak connectivity. The phrase "buy-back" creates an implicit link with the previous t-unit ("shares were purchased").
	Spec'	1	Mixture of general and specific. Impact of buy-back is quantified but potential gain arising from reinvestment of funds is not.
	Sh'	1	No change in information category.
	Overall	**8**	
t24			*This demonstrates the benefits of using the buy-back facility to enhance shareholder value.*
	Top'	2	Main topic 'A'. Share buy-back affects results. No expressed indication of a forward-looking element (N.B. A review of the annual report indicated that the trust does not have the authority to buy-back shares in future accounting periods and is not seeking that authority).
	Int'	0	No intertextual reference.
	Conj'	2	Causal conjunction (markers – "this demonstrates" and "to enhance").
	Conn'	2	Strong connectivity. The phrase "the buy-back" creates an explicit link with the previous t-unit ("buy-back").
	Spec'	0	Focus predominantly on generalities.
	Sh'	1	No change in information category.
	Overall	**7**	
t25			***Management of the portfolio*** *Our Investment Managers have positioned the Company's assets extremely well to take advantage of growth opportunities.*
	Top'	2	Main topic 'A'. Manager's performance affects results.
	Int'	1	Implicit intertextual reference to Manager's report and portfolio analysis (signalled by "Our investment Managers…").
	Conj'	2	Causal conjunction (marker – "to take advantage of").
	Conn'	1	Weak connectivity. The phrases "Management of the portfolio" and "Investment Managers" create explicit links with an earlier t-unit other than the previous t-unit ("as the Managers switched the portfolio" in *t18*).

t-unit	*Indexical*	*Score*	*Text and comment*
	Spec'	0	Focus predominantly on generalities.
	Sh'	0	Information category changes from "share buy-backs" to "management of portfolio".
	Overall	**6**	
t26			*They took a decision some 12 to 18 months ago to target technology companies whether in the medical, computer software or emerging Internet areas.*
	Top'	2	Main topic 'A'. Manager's performance affects results.
	Int'	1	Implicit intertextual reference to Manager's report and portfolio analysis (signalled by "They took a decision…").
	Conj'	0	No conjunction.
	Conn'	1	Weak connectivity. The phrase "technology companies" creates an explicit link with an earlier t-unit other than the previous t-unit ("technology stocks" in *t18*).
	Spec'	0	Focus predominantly on generalities.
	Sh'	1	No change in information category.
	Overall	**5**	
t27			*I am pleased that our approach to the Internet has been described as the Klondike approach.*
	Top'	2	Main topic 'A'. Manager's performance affects results.
	Int'	0	No intertextual reference.
	Conj'	0	No conjunction.
	Conn'	2	Strong connectivity. The word "Internet" creates an explicit link with the previous t-unit ("Internet").
	Spec'	0	Focus predominantly on generalities.
	Sh'	1	No change in information category.
	Overall	**5**	
t28			*Rather than seek to mine the dot.com companies, the Managers have sought out the stocks selling the picks and shovels.*
	Top'	2	Main topic 'A'. Manager's performance affects results.
	Int'	1	Implicit intertextual reference to Manager's report and portfolio analysis (signalled by "the Managers have sought out…").
	Conj'	2	Adversative conjunction (marker – "rather than").
	Conn'	1	Weak connectivity. The phrase "sought out the stocks selling the picks and shovels" creates an implicit link with the previous t-unit ("the Klondike approach").
	Spec'	0	Focus predominantly on generalities.
	Sh'	1	No change in information category.
	Overall	**7**	
t29			*The process has reduced the risk inherent in Internet stocks whilst capturing significant upside.*
	Top'	2	Main topic 'A'. Manager's performance affects results.
	Int'	0	No intertextual reference.
	Conj'	2	Causal conjunction (marker – "has reduced") and adversative conjunction (marker – "whilst").
	Conn'	1	Weak connectivity. The word "Internet" creates an explicit link with an earlier t-unit other than the previous t-unit ("Internet" in *t27*).
	Spec'	0	Focus predominantly on generalities.
	Sh'	1	No change in information category.
	Overall	**6**	

t-unit	*Indexical*	*Score*	*Text and comment*
t30			*Your Managers have also demonstrated considerable skill at maximising returns from the portfolio.*
	Top'	2	Main topic 'A'. Manager's performance affects results.
	Int'	1	Implicit intertextual reference to Manager's report and portfolio analysis (signalled by "Your Managers have also demonstrated…").
	Conj'	0	No conjunction.
	Conn'	1	Weak connectivity. The phrase "Your Managers" creates an explicit link with an earlier t-unit other than the previous t-unit ("the Managers" in *t28*).
	Spec'	0	Focus predominantly on generalities.
	Sh'	1	No change in information category.
	Overall	**5**	
t31			*Based on their risk-reward analysis they have been prepared to run some winners to extract the return, commensurate with the initial risk taken.*
	Top'	2	Main topic 'A'. Manager's performance affects results.
	Int'	1	Implicit intertextual reference to Manager's report and portfolio analysis (signalled by "Based on their risk-reward analysis…").
	Conj'	2	Causal conjunction (marker – "based on").
	Conn'	2	Strong connectivity. The phrase "the return" creates an explicit link with the previous t-unit ("returns").
	Spec'	0	Focus predominantly on generalities.
	Sh'	1	No change in information category.
	Overall	**8**	
t32			*A good example of this was [Name] which on its sale after the year-end generated profits of £43.1 million on a cost of £1.6 million.*
	Top'	2	Main topic 'A'. Manager's performance affects results. Main topic 'B'. Forward-looking information (impact of sale of [Name] after the year-end).
	Int'	0	No intertextual reference.
	Conj'	1	Additive conjunction (marker – "[a] good example of this".
	Conn'	0	No connectivity.
	Spec'	2	Highly specific.
	Sh'	1	No change in information category.
	Overall	**6**	
t33			*Your Board has been supportive of this approach and point out some of the many other successes such as [Name], [Name], [Name] and [Name] all of which have performed exceptionally well.*
	Top'	2	Main topic 'A'. Manager's performance affects results.
	Int'	1	Implicit intertextual reference to Manager's report and portfolio analysis (signalled by "many other successes such as…").
	Conj'	1	Additive conjunction (marker – "such as".
	Conn'	0	No connectivity.
	Spec'	1	The phrase "some of the many other successes such as" signals partial explication.
	Sh'	1	No change in information category.
	Overall	**6**	

t-unit	*Indexical*	*Score*	*Text and comment*
t34			*Indeed, even if the huge success represented by [Name] were to be excluded from the portfolio, the Company would still have been the best performing Smaller Companies Trust.*
	Top'	2	Main topic 'A'. Manager's performance affects results. Main topic 'D'. Performance comparison with industry sector.
	Int'	1	Implicit intertextual reference to Manager's report and portfolio analysis (signalled by "huge successes represented by [Name]…").
	Conj'	2	Adversative conjunction (marker – "even if"). Although the marker "[i]ndeed" signals additive conjunction, the presence of an adversative marker scores '2' for the t-unit.
	Conn'	2	Strong connectivity. The phrase "huge success" creates an explicit link with the previous t-unit ("many other successes").
	Spec'	1	Mixture of general and specific. The performance of the company (excluding [Name]) relative to the sector is specifically identified but the effect of [Name] on the results not quantified.
	Sh'	1	No change in information category.
	Overall	**9**	
t35			***Shareholder Base*** *In January 1999, the shareholder base of the Company was 99% institutional with a very small private investor exposure.*
	Top'	2	Main topic 'C'. Explanation of ratios.
	Int'	1	Implicit intertextual reference to 'Directors' report' / 'Accounting policies and notes'.
	Conj'	0	No conjunction.
	Conn'	0	No connectivity.
	Spec'	2	Highly specific.
	Sh'	0	Information category changes from "management of portfolio" to "shareholder base".
	Overall	**5**	
t36			*Your Board was particularly keen to increase the number of private investors and sought ideas to achieve this.*
	Top'	1	Supporting statement. No indication of a defined main topic.
	Int'	0	No intertextual reference.
	Conj'	0	No conjunction.
	Conn'	2	Strong connectivity. The phrase "private investors" creates an explicit link with the previous t-unit ("private investor").
	Spec'	0	Focus predominantly on generalities.
	Sh'	1	No change in information category.
	Overall	**4**	
t37			*We rejected supporting the AITC 'its' campaign* [N.B. *t37* and *t38* are treated as separate t-units even though they appear as a single sentence in the text. They are treated separately because they are two units of narrative each of which satisfies the definition of a unit (one independent clause with all subordinate clauses attached to it) joined by the conjunction "as". See section 5.3.1 for explanation.]
	Top'	1	Supporting statement. No indication of a defined main topic.
	Int'	0	No intertextual reference.
	Conj'	0	No conjunction.
	Conn'	0	No connectivity.
	Spec'	2	Highly specific.
	Sh'	1	No change in information category.
	Overall	**4**	

t-unit	*Indexical*	*Score*	*Text and comment*
t38			*as we felt that it was unlikely that a generic advertising campaign would benefit our specialist Trust.* [N.B. See comment at *t37* above.]
	Top'	1	Supporting statement. No indication of a defined main topic.
	Int'	1	No intertextual reference.
	Conj'	2	Causal conjunction (marker – "as" (meaning "because")).
	Conn'	2	Strong connectivity. The word "campaign" creates an explicit link with the previous t-unit ("campaign").
	Spec'	0	Focus predominantly on generalities.
	Sh'	1	No change in information category.
	Overall	**7**	
t39			*Instead, we launched our [Name] and [Name] plans and concentrated marketing on the private client broker market and sought positive press comment.*
	Top'	2	Main topic 'A'. Impact of launch of [Name] and [Name] plans affects results. Main topic 'B'. Launch of [Name] and [Name] plans during accounting period carries an expressed indication of a forward-looking element, namely the impact of these initiatives on future accounting periods.
	Int'	1	Implicit intertextual reference to 'Directors' report' / 'Accounting policies and notes'.
	Conj'	2	Adversative conjunction (marker – "[i]nstead").
	Conn'	1	Weak connectivity. The phrase "private client" creates an explicit link to a t-unit other than the previous t-unit ("private investors" in *t36*).
	Spec'	2	Highly specific.
	Sh'	1	No change in information category.
	Overall	**9**	
t40			*I am delighted that the private investor interest in the Company has now grown to some 20%* [N.B. *t40* and *t41* are treated as separate t-units even though they appear as a single sentence in the text. They are treated separately because they are two units of narrative each of which satisfies the definition of a unit (one independent clause with all subordinate clauses attached to it) joined by the conjunction "and". See section 5.3.1 for explanation.]
	Top'	2	Main topic 'C'. Explanation of ratios.
	Int'	1	Implicit intertextual reference to 'Directors' report' / 'Accounting policies and notes'.
	Conj'	0	No conjunction.
	Conn'	2	Strong connectivity. The phrase "private investor" creates an explicit link with the previous t-unit ("private client").
	Spec'	2	Highly specific.
	Sh'	1	No change in information category.
	Overall	**8**	
t41			*and I am delighted to welcome all new shareholders to the Company.* [N.B. See comment at *t40* above.]
	Top'	1	Supporting statement. No indication of a defined main topic.
	Int'	0	No intertextual reference.
	Conj'	0	No conjunction.
	Conn'	1	Weak connectivity. The phrase "new shareholders" creates an implicit link with the previous t-unit ("private investor interest…has now grown").

t-unit	*Indexical*	*Score*	*Text and comment*
	Spec'	0	Focus predominantly on generalities.
	Sh'	1	No change in information category.
	Overall	**3**	
t42			***Awards*** *As mentioned above, your Company has recently won a number of awards.*
	Top'	2	Main topic 'D'. Performance comparison with industry sector.
	Int'	0	No intertextual reference.
	Conj'	1	Additive conjunction (marker – "[a]s mentioned above").
	Conn'	1	Weak connectivity. The entire t-unit creates an explicit link with an earlier t-unit other than the previous t-unit (*t8*).
	Spec'	0	Focus predominantly on generalities.
	Sh'	0	Information category changes from "shareholder base" to "awards".
	Overall	**4**	
t43			*These have all been in the Best Smaller Companies Investment Trust sector and include such prestigious awards as [Name], [Name] and [Name].*
	Top'	2	Main topic 'D'. Performance comparison with industry sector.
	Int'	0	No intertextual reference.
	Conj'	1	Additive conjunction (marker – "and include").
	Conn'	2	Strong connectivity. The word "awards" creates an explicit link with the previous t-unit ("awards").
	Spec'	2	Highly specific.
	Sh'	1	No change in information category.
	Overall	**8**	
t44			***Prospects*** *The past year has been very good* [N.B. *t44* and *t45* are treated as separate t-units even though they appear as a single sentence in the text. They are treated separately because they are two units of narrative each of which satisfies the definition of a unit (one independent clause with all subordinate clauses attached to it) joined by the conjunction "and". See section 5.3.1 for explanation.]
	Top'	2	Main topic 'B'. Forward-looking information (signalled by heading "Prospects"). Main topic 'D'. Performance comparison of current accounting period with future accounting period(s).
	Int'	0	No intertextual reference.
	Conj'	0	No conjunction.
	Conn'	1	Weak connectivity. The phrase "The past year" creates an explicit link with an earlier t-unit other than the previous t-unit ("the past year" in *t9*).
	Spec'	0	Focus predominantly on generalities.
	Sh'	0	Information category changes from "awards" to "prospects".
	Overall	**3**	
t45			*and I am pleased that the current year has also got off to a good start with net asset value per share increasing a further 39.6% to 529.8 pence.* [N.B. See comment at *t44* above.]
	Top'	2	Main topic 'B'. Forward-looking information. Main topic 'C'. Explanation of ratios.

t-unit	*Indexical*	*Score*	*Text and comment*
	Int'	0	No intertextual reference.
	Conj'	0	No conjunction.
	Conn'	2	Strong connectivity. The phrase "the current year" creates an explicit link with the previous t-unit ("The past year").
	Spec'	2	Highly specific.
	Sh'	1	No change in information category.
	Overall	**7**	
t46			*Your Managers will continue to adopt their calculated approach supporting dynamic growth companies.*
	Top'	2	Main topic 'B'. Forward-looking information.
	Int'	1	Implicit intertextual reference to Manager's report and portfolio analysis (signalled by "Your Managers…") [also discussed in 'Outlook' section of Manager's report].
	Conj'	0	No conjunction.
	Conn'	1	Weak connectivity. The phrase "their calculated approach" creates an explicit link with an earlier t-unit other than the previous t-unit ("this approach" in *t33*).
	Spec'	0	Focus predominantly on generalities.
	Sh'	1	No change in information category.
	Overall	**5**	
t47			*I believe that over the long term this will deliver further good returns to shareholders.*
	Top'	2	Main topic 'B'. Forward-looking information.
	Int'	0	No intertextual reference.
	Conj'	2	Causal conjunction (marker – "will deliver").
	Conn'	1	Weak connectivity. The word "this" creates an implicit link with the previous t-unit ("their calculated approach").
	Spec'	0	Focus predominantly on generalities.
	Sh'	1	No change in information category.
	Overall	**6**	

5C.3 Scoring sheet and tabulated summary of indexical scores [Trust Id. 'D' (Appendix 5C.2)]

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Col.1	*Col.2*	*Col.3*	*Col.4*	*Col.5*	*Col.6*	*Col.7*	*Col.8*	*Col.9*	*Col.10*	*Col.11*	*Col.12*	*Col.13*	*Col.14*	*Col.15*	*Col.16*
t-unit	**Information category**	**Valence of news**	**Main topics**						**Overall**						**Overall**
			A	**B**	**C**	**D**	**E**	**S/S's**	**Top'**	**Int'**	**Conj'**	**Conn'**	**Spec'**	**Sh'**	**Texture**
1	**Performance**	*G*				1			2	1	0	0	2	0	5
2	Performance	*G*						1	1	0	0	2	0	1	4
3	Performance	*G*	1		1	1			2	1	2	1	2	1	9
4	Performance	*G*			1				2	1	2	2	2	1	10
5	Performance	*G*			1				2	1	1	0	2	1	7
6	Performance	*G*				1			2	1	2	1	2	1	9
7	Performance	*G*				1			2	0	0	2	0	1	5
8	Performance	*G*				1			2	0	2	1	0	1	6
9	Performance	*G*						1	1	0	0	0	0	1	2
10	Performance	*N*						1	1	0	0	1	0	1	3
11	Performance	*G*			1	1			2	1	2	1	2	1	9
12	**Earnings and dividends**	*B*				1	1		2	0	0	2	0	0	4
13	Earnings per share	*B*			1	1	1		2	1	0	2	2	1	8
14	Dividends	*B*					1		2	1	2	1	2	1	9
15	Dividends	*B*				1	1		2	1	2	1	2	1	9
16	Earnings per share	*B*				1	1		2	0	0	1	0	1	4
17	Earnings per share	*B*	1			1	1		2	1	2	2	1	1	9
18	Earnings per share	*B*	1				1		2	1	2	0	2	1	8
19	Earnings per share	*B*	1			1	1		2	1	2	1	1	1	8
20	Earnings per share	*N*	1			1	1		2	1	1	0	1	1	6
21	**Share buy-backs**	*N*	1						2	1	0	0	1	0	4
22	Share buy-backs	*N*	1		1				2	1	0	1	2	1	7
23	Share buy-backs	*G*	1		1				2	1	2	1	1	1	8
24	Share buy-backs	*G*	1						2	0	2	2	0	1	7
25	**Management of portfolio**	*G*	1						2	1	2	1	0	0	6
26	Management strategy	*G*	1						2	1	0	1	0	1	5
27	Management strategy	*G*	1						2	0	0	2	0	1	5
28	Management strategy	*G*	1						2	1	2	1	0	1	7
29	Management strategy	*G*	1						2	0	2	1	0	1	6
30	Management strategy	*G*	1						2	1	0	1	0	1	5
31	Management strategy	*G*	1						2	1	2	2	0	1	8

5C.3 Scoring sheet and tabulated summary of indexical scores

[Trust Id. 'D' (Appendix 5C.2)]

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Col.1	*Col.2*	*Col.3*	*Col.4*	*Col.5*	*Col.6*	*Col.7*	*Col.8*	*Col.9*	*Col.10*	*Col.11*	*Col.12*	*Col.13*	*Col.14*	*Col.15*	*Col.16*
t-unit	**Information category**	**Valence of news**	**Main topics**						**Overall**						**Overall**
			A	**B**	**C**	**D**	**E**	**S/S's**	**Top'**	**Int'**	**Conj'**	**Conn'**	**Spec'**	**Sh'**	**Texture**
32	Management strategy	*G*	1	1					2	0	1	0	2	1	6
33	Management strategy	*G*	1						2	1	1	0	1	1	6
34	Management strategy	*G*	1			1			2	1	2	2	1	1	9
35	**Shareholder base**	*B*			1				2	1	0	0	2	0	5
36	Shareholder base	*N*						1	1	0	0	2	0	1	4
37	AITC marketing campaign	*N*						1	1	0	0	0	2	1	4
38	AITC marketing campaign	*N*						1	1	1	2	2	0	1	7
39	Launch of new products	*G*	1	1					2	1	2	1	2	1	9
40	Shareholder base	*G*			1				2	1	0	2	2	1	8
41	Shareholder base	*N*						1	1	0	0	1	0	1	3
42	**Awards**	*G*				1			2	0	1	1	0	0	4
43	Awards	*G*				1			2	0	1	2	2	1	8
44	**Prospects**	*G*		1		1			2	0	0	1	0	0	3
45	Prospects	*G*		1	1				2	0	0	2	2	1	7
46	Prospects	*G*		1					2	1	0	1	0	1	5
47	Prospects	*G*		1					2	0	2	1	0	1	6
	Total:		20	6	10	17	9	7	87	28	46	52	43	40	451
	Maximum:		47	47	47	47	47	47	94	94	94	94	94	47	517
	Percentage of maximum:		**42.6%**	**12.8%**	**21.3%**	**36.2%**	**19.1%**	**14.9%**	**92.6%**	**29.8%**	**48.9%**	**55.3%**	**45.7%**	**85.1%**	**87.2%**

Valence of news

"Good news" [G] t-units [% of total t-units]	**64%**
"Bad news" [B] t-units [% of total t-units]	**19%**
"Neutral" [N] t-units [% of total t-units]	**17%**
Total number of t-units	**47**

Appendix 5D
Indexical scores and ranks: comparison with Flesch readability scores

Trust Id.	*[from 7F]* **Topicality**		*[from 7F]* **Intertextuality**		*[from 7F]* **Conjunction**		*[from 7F]* **Connectivity**		*[from 7F]* **Specificity**		*[from 7F]* **Shift**	
	Score	*Rank*	*Score*	*Rank*	*Score*	*Rank*	*Score*	*Rank*	*Score*	*Rank*	*Score*	*Rank*
A	86.5	17	32.4	24	32.4	22	41.9	11	25.7	22	83.8	8
B	89.6	12	55.2	1	35.4	20	49.0	5	28.1	18	72.9	21
C	81.7	22	46.3	4.5	42.7	14	65.9	1	24.4	23	82.9	9
D	92.6	8	29.8	26	48.9	5	55.3	2	45.7	5.5	85.1	3
E	85.2	19	38.9	17	38.9	18	31.5	24	40.7	8.5	70.4	24
F	97.8	3.5	41.3	13.5	30.4	24	26.1	25	32.6	14.5	78.3	14.5
G	95.6	6	43.3	9	53.3	4	36.7	19	21.1	25	84.4	4
H	86.9	16	38.1	18.5	48.8	6	23.8	26	27.4	20	81.0	10
I	86.2	18	39.7	15	39.7	17	32.8	22	46.6	3	72.4	22
J	89.5	13	33.1	22	47.6	8	46.0	7	41.9	7	83.9	7
K	93.1	7	37.9	20	44.8	12	41.4	13	37.9	11	75.9	17
L	78.7	25	36.2	21	44.7	13	41.5	12	34.0	13	80.9	11
M	96.0	5	46.0	6.5	36.0	19	38.0	17	32.0	16	84.0	6
N	100.0	1	53.0	2	45.5	11	54.5	3	53.0	1	90.9	1
O	84.9	20	43.0	10	32.6	21	38.4	16	32.6	14.5	79.1	13
P	98.1	2	48.1	3	59.3	2	46.3	6	40.7	8.5	85.2	2
Q	90.7	11	46.3	4.5	46.3	9	37.0	18	24.1	24	74.1	19
R	92.3	9	42.3	12	30.8	23	38.5	15	26.9	21	73.1	20
S	79.7	24	38.1	18.5	28.0	25	34.7	21	28.0	19	79.7	12
T	82.0	21	32.0	25	46.0	10	32.0	23	30.0	17	72.0	23
U	81.5	23	42.6	11	27.8	26	35.2	20	20.4	26	63.0	26
V	92.0	10	46.0	6.5	42.0	15	42.0	10	46.0	4	68.0	25
W	88.8	14	32.5	23	40.0	16	43.8	9	40.0	10	77.5	16
X	97.8	3.5	41.3	13.5	60.9	1	52.2	4	45.7	5.5	78.3	14.5
Y	75.7	26	39.2	16	48.6	7	44.6	8	48.6	2	75.7	18
Z	87.5	15	45.5	8	55.7	3	38.6	14	35.2	12	84.1	5

Appendix 5D
Indexical scores and ranks: comparison with Flesch readability scores

Trust Id.	*[from 7F]* **Overall texture**		*[from 7E]* **Flesch readability score**	
	Score	*Rank*	*Score*	*Rank*
A	47.4	23	41.9	3.5
B	53.4	10	31.4	17
C	55.0	6	39	7
D	57.3	4	47.1	1
E	49.2	19	27.1	24
F	48.6	20.5	37.8	9
G	53.1	12	31.3	18
H	48.3	22	39.1	6
I	51.1	16	37.5	10
J	54.5	8	37.1	11
K	53.3	11	29.6	21
L	50.1	17	28.9	23
M	52.7	13	33.9	15
N	63.9	1	34.5	14
O	49.3	18	35.1	13
P	60.9	3	25.2	26
Q	51.2	15	41.9	3.5
R	48.6	20.5	36.7	12
S	45.1	25	38.8	8
T	46.9	24	29.4	22
U	43.4	26	45.7	2
V	54.9	7	40.3	5
W	51.6	14	30.6	20
X	61.3	2	31.2	19
Y	53.6	9	26.7	25
Z	55.4	5	31.8	16

Appendix 5E
Indexical scores and ranks based on sums of squares for sensitivity analysis

Trust Id.	Topicality		Intertextuality		Conjunction		Connectivity		Specificity		Shift	
	Score	*Rank*	*Score*	*Rank*	*Score*	*Rank*	*Score*	*Rank*	*Score*	*Rank*	*Score*	*Rank*
A	79.7	17	17.6	24	31.1	21	37.2	7	25.0	20	83.8	8
B	84.4	12	37.0	1	31.3	20	45.3	3	25.5	18	72.9	21
C	72.6	22	32.9	3	38.4	14	57.3	1	20.7	23	82.9	9
D	88.8	8	14.9	26	45.7	6	43.6	4	42.0	6	85.1	3
E	77.8	19	23.1	16	38.0	15	26.9	20	38.9	7	70.4	24
F	96.7	3.5	25.0	11.5	28.3	24	21.7	24	31.5	12	78.3	14.5
G	93.3	6	25.0	11.5	47.8	4	25.0	22.5	17.2	26	84.4	4
H	80.4	16	19.0	22	43.5	7	17.9	26	22.0	22	81.0	10
I	79.3	18	28.4	7	37.1	16	26.7	21	42.2	5	72.4	22
J	84.3	13	18.1	23	42.3	9	38.3	6	37.1	8	83.9	7
K	89.7	7	22.4	19	41.4	11	32.8	10	36.2	10	75.9	17
L	68.1	25	20.2	20	41.5	10	32.4	11	30.9	14	80.9	11
M	94.0	5	25.0	11.5	36.0	17	27.0	19	28.0	16	84.0	6
N	100.0	1	34.1	2	40.9	12	45.5	2	49.2	1	90.9	1
O	77.3	20	26.2	8	30.2	22	29.7	13	29.1	15	79.1	13
P	97.2	2	24.1	15	55.6	2	36.1	8	37.0	9	85.2	2
Q	86.1	11	25.0	11.5	39.8	13	29.6	14	17.6	25	74.1	19
R	88.5	9	30.8	5	28.8	23	28.8	16	25.0	20	73.1	20
S	69.5	24	22.5	18	25.8	25	25.0	22.5	25.0	20	79.7	12
T	73.0	21	20.0	21	43.0	8	20.0	25	27.0	17	72.0	23
U	72.2	23	28.7	6	23.1	26	28.7	17	19.4	24	63.0	26
V	88.0	10	31.0	4	33.0	19	35.0	9	43.0	3	68.0	25
W	83.1	14	16.3	25	35.0	18	29.4	15	35.0	11	77.5	16
X	96.7	3.5	22.8	17	56.5	1	41.3	5	42.4	4	78.3	14.5
Y	63.5	26	25.0	11.5	45.9	5	31.8	12	44.6	2	75.7	18
Z	81.3	15	25.0	11.5	54.0	3	28.4	18	31.3	13	84.1	5

Appendix 5E
Indexical scores and ranks based on sums of squares for sensitivity analysis

Trust Id.	Overall texture	
	Score	*Rank*
A	40.3	22
B	46.0	7.5
C	46.2	6
D	48.8	4
E	42.3	16
F	42.4	15
G	43.7	14
H	38.7	23
I	44.2	11
J	45.9	9.5
K	46.0	7.5
L	40.6	20
M	44.0	12
N	55.7	1
O	40.4	21
P	51.7	3
Q	41.3	19
R	41.9	17
S	35.8	25.5
T	38.3	24
U	35.8	25.5
V	47.0	5
W	41.5	18
X	53.2	2
Y	43.8	13
Z	45.9	9.5

CHAPTER 6

A TRANSITIVITY INDEX AND *DICTION* ANALYSIS

6.1 Introduction and overview of chapter

This chapter describes a transitivity index and *DICTION* analysis. In contrast to the texture index, which was developed from the applied linguistics literature and which, prior to this study, has not been used in an accounting related application, the approaches developed in this chapter are developed from the managerial business communications literature (section 4.6 and Table 4.4) and have been used, albeit to a limited extent, in accounting related applications. Like the texture index, both the transitivity index and *DICTION* analysis have a sound theoretical basis in linguistics.

The transitivity index is a measure of the number of passive constructions in a text. The focus of the approach is the syntactic dimension. Together with the texture index, it goes some way towards redressing the lack of dimension on the syntactic dimension, exhibited in the existing portfolio of approaches. The transitivity index is developed from Thomas' (1997) model for the investigation of linguistic structure and, in particular, the linguistic dimension of transitivity (section 4.3.1). Thomas' approach, which is written from an applied linguistics / managerial perspective (section 1.3) is predominantly theoretical, with only a limited applied orientation. The transitivity index developed in this study builds on these theoretical insights, in developing for accounting applications a rigorous method of analysis. In particular, detailed rules for application are developed. Further, and in keeping with the primary contribution of the study, the method is developed with the expressed intention of providing reliable dependent variables, which can serve as inputs to tests of association and tests of differentiation. The method is validated in the context of the framework of recognised methodological assessment criteria specified in the accounting literature. The aptitude of the method for investigating impression management in accounting narratives is demonstrated through the empirical application reported in chapter 7. A detailed practical illustration of its application for the texts of two Chairman's statement narratives is included in this chapter as Appendix 6A.

DICTION is a commercially available computerised content analysis software programme that examines a text for verbal tone. Of the approaches identified in the managerial literature as offering potential (sections 4.3.1 to 4.3.3), *DICTION* was

identified as the approach most directly oriented towards the requirements of accounting researchers investigating impression management (sections 4.3.3 and 4.4). The specific contribution of this study is to build on the limited accounting-related application in the managerial business communications literature in exploiting *DICTION* towards its full potential. Like the texture index and the transitivity index, *DICTION* is validated in the context of the framework of recognised methodological assessment criteria. The empirical application in chapter 7 demonstrates its aptitude for the investigation of impression management. An illustrative example of a report of *DICTION* scores for the text of a Chairman's statement drawn from the empirical application in chapter 7 is included here as Appendix 6B.

The structure of the chapter is as follows. Section 6.2 and 6.3 focus respectively on the transitivity index and *DICTION* analysis. Some further comment by way of explication on the detailed structuring within these sections is included at the start of sections 6.2 and 6.3. Section 6.4 summarises and concludes.

6.2 A transitivity index

The transitivity index is a measure of the number of passive constructions in a text. The relevance of the measurement of preponderance of passive constructions to the accounting researcher investigating impression management, can be demonstrated through the linkage of attribution theory to the analysis of transitivity within a systemic approach to language study. Specifically, patterns of causal attribution find expression in particular linguistic structures that can be quantified through a transitivity index. Section 6.2.1 elaborates upon this linkage between attribution theory and the linguistic analysis of transitivity (Thomas, 1997). This section also demonstrates that the analysis of transitivity has a sound theoretical basis in linguistics. Section 6.2.2 provides an overview of the transitivity index showing how the general principles established in the managerial business communications literature can be tailored to the specific requirements of accounting researchers investigating impression management. Three aspects are considered: the basic unit of analysis (section 6.2.2.1), the scoring approach (section 6.2.2.2) and rules for application (section 6.2.2.3). The interpretation of transitivity scores is discussed in section 6.2.3. Finally, in section 6.2.4, the transitivity index is subjected to the framework of methodological assessment criteria.

6.2.1 Theoretical framework

A comprehensive review of studies investigating patterns of causal attribution in accounting narratives in corporate reports can be found in section 3.5. Broadly, these studies are concerned with the patterns of causal reasoning used to explain corporate performance. Researchers hypothesise the following pattern in explanations given for corporate performance (Bettman and Weitz (1983) are typical): reasons internal to the organisation will be cited for favourable performance outcomes and external factors will be noted for unfavourable outcomes. The existence of such self-serving attributions may indicate a distortion of causal reasoning about corporate performance (p. 167). Taken together, the studies reviewed in section 3.5 provide some evidence that managements pursue a self-serving strategy in the patterns of causal reasoning used to explain or account for company performance and second, that this tendency is particularly evident with 'poor performers'. Contextualizing this research within the broader financial disclosure literature, where there is corroborative evidence in support of impression management, adds further support to the argument that the existence of self-serving attribution is indicative of impression management. This is, therefore, a fruitful area for further research.

The analysis of transitivity is one of the dimensions of linguistic structure investigated by Thomas (1997). As indicated in sections 3.4.2 and 4.3.1, the objective of the study was to investigate the linguistic differences between 'good news' and 'bad news' annual reports for a particular company over a five-year period, during which the company experienced a systematic down turn in performance. Thomas' approach is developed in the context of a systemic approach to language study. The systemic approach (see e.g., Halliday, 1976; 1978; 1985; Lemke, 1989; Fawcett and Halliday, 1978; Butler, 1985) is concerned with how linguistic structures are exploited in strategic narrative construction. Thomas (1997) analyses transitivity on two dimensions: first, the type of verb that is used; and second, the form of the verb. It is this second dimension from which the transitivity index is developed.

The form of the verb is concerned with verbal voice - whether the verb is active or passive. Consider the following sentences by way of illustration:

(i) *The company experienced a downturn in the performance of the portfolio.*

(ii) *A downturn in the performance of the portfolio was experienced by the company.*

(iii) *A downturn in the performance of the portfolio was experienced.*

The first sentence uses the active voice, while the second and third sentences use the passive voice. Of particular relevance is sentence three, which demonstrates that the use of the passive voice permits the omission of the 'agent phrase' ('by the company'). There are, therefore, two stages of depersonalisation that result from the use of the passive voice. The first is the movement of the 'agent phrase' from sentence initial to sentence end position and the second, the omission of the agent phrase. Whichever strategy is employed, the agent, the person or persons behind the action, is downplayed.

In this regard, Thomas (1997) notes that active voice and active verbs promote the idea of a company that is moving forward, that is progressive, aggressive and successful in the marketplace. Use of the passive voice is reserved for those occasions when writers finds it advantageous to distance themselves from the message (pp. 52-53). Thomas found a predictable increase in passive constructions as the years passed and profits decreased (p. 53). As the news becomes more negative, linguistic structures suggest a factual, objective situation caused by circumstances not attributable to any persons who might otherwise be thought responsible (p. 47). Passive constructions give a text a veneer of objectivity, neutrality, scientific 'truth' or 'fact' (Carter *et al.,* 1997, p. 224).

The focus here on a particular dimension of linguistic structure was discussed in detail in section 4.4. In particular, it was argued that the dimensions of linguistic structure investigated by Thomas (1997) are not mutually dependent. Also, the focus on transitivity is consistent with the desire to develop a linguistic measure that complements those studies investigating patterns of causal reasoning and attribution (section 3.5). Also, as will be demonstrated below (section 6.2.2), this particular dimension lends itself to the development of a measurement index that is not only theoretically valid, but also objective and reliable (see also section 6.2.4). The exploitation for accounting applications of the other dimensions of strategic narrative construction embraced by Thomas' approach, and not embraced by the texture index (section 4.4 and chapter 5), are discussed as a matter for further research (section 8.5.1).

It is not considered necessary to run correlations between, for example, ranks based on the analysis of patterns of causal attribution with ranks based on the application of the

transitivity index. Unlike the texture index, which is developed expressly as an alternative to readability formulas, and therefore required correlations to demonstrate that indexical scores are not proxies for readability scores (section 5.5), the transitivity index is developed as a complement to those methods which examine patterns of causal attribution. Moreover, the transitivity index is concerned with grammatical verb form as opposed to the predominant focus on thematic content, which characterises the attribution studies.

6.2.2 Developing a transitivity index for accounting applications

To be of use to accounting researchers, it is necessary to develop the linguistic principles into usable methods for analysis. In particular, detailed rules for application must be developed. Moreover, and in terms of the orientation of this study, the method must be capable of providing inputs to tests of association and tests of differentiation. Sections 6.2.2.1 to 6.2.2.3 describe respectively the basic unit of analysis, the scoring approach and rules for application.

The transitivity index described here embraces a manual approach to analysis. The computerised quantification of passives is a feature of computerised readability statistics such as those found in commonly used word-processing packages. Typically, these packages report the percentage of passive sentences in a text, along with readability scores such as Flesch. It is recognised that there is potential for objectivity and reliability associated with such a computerised content analysis, together with its ease of use (Core, 2001). However, on carrying out a comparative manual analysis it was found that the computerised method of a widely used package (Microsoft Word (version 7.0)) fails to code sentences sufficiently accurately to be useful as a research tool for precise quantification. The primary purpose of the word-processing package is to direct the writer to areas that require clarification or improvement; it is not designed as a precise tool for analytical research. The issues associated with a manual vs. computerised analysis are discussed further and illustrated with reference to sample texts in section 6.2.4. The empirical application in chapter 7 reports both computerised scores and scores based on the manual approach. Embracing the computerised approach, despite its acknowledged limitations, recognises the desirability of computer-based measurement (Core, 2001). In this regard, the possibilities for developing a more refined computerised measure of transitivity is discussed as a matter for further research in section 8.3.3.

6.2.2.1 Basic unit of analysis

As with the texture index (section 5.3.1), the basic unit of analysis employed here is the text-unit (t-unit). As indicated in section 5.3.1, this reflects a well-established practice in text analysis.

6.2.2.2 Scoring approach

The scoring approach used by Thomas (1997) is simply to count the number of passive constructions in the text, in order to determine whether that number increased or decreased over time. The approach takes no account of variation in text length by, for example, expressing the number of passive verbs as a percentage of total verbs. The approach adopted in this study is to categorise t-units as active or passive and to express that relationship as an index, namely the percentage of passive t-units in relation to total t-units. The output is therefore a dependent variable, which can be used in tests of association and tests of differentiation.

A t-unit is categorised as passive if it contains a passive construction (section 6.2.2.3). It is acknowledged that categorising on this basis necessitates some loss of detail. For example, a t-unit may contain more than one passive construction or a mixture of active and passive constructions. The potential loss of detail is, however, mitigated by having the t-unit as the basic unit of analysis, rather than the sentence as written. Section 6.2.4, which considers the transitivity index in the context of the recognised methodological assessment criteria, offers a justification for the t-unit approach.

6.2.2.3 Rules for application

Developing decision rules for application is a critical factor in attaining the required degree of reliability. Reproducibility, and therefore reliability, is dependent on the degree of correlation between two or more coders using the same text.

Passive constructions can be categorised as passive verbs and passive verbals. The first category, the passive verb, is by far the most common. Passive verbs are created by combining a form of the verb 'to be' with the past participle of the main verb. This structure finds expression in various tenses. As indicated in section 6.2.1, a sentence (or t-unit) in the passive voice will not always include an agent of the action. Further, only transitive verbs (verbs which take objects) can be transformed into passive constructions. Table 6.1 illustrates passive verb structures across the range of tenses.

Table 6.1
Passive verbs

Tense	Subject	Auxiliary (verb 'to be')		Past participle	Agent phrase *(can be omitted)*
		Singular	**Plural**		
Present tense	The portfolio(s)	is / is being	are / are being	managed	*by [Name].*
Past tenses:					
Perfect	The portfolio(s)	has been	have been	managed	*by [Name].*
Imperfect	The portfolio(s)	was / was being	were / were being	managed	*by [Name].*
Pluperfect	The portfolio(s)	had been	had been	managed	*by [Name].*
Future tenses:					
Future	The portfolio(s)	will be	will be	managed	*by [Name].*
Future perfect	The portfolio(s)	will have been	will have been	managed	*by [Name].*
Conditional tenses:					
Conditional	The portfolio(s)	would be / should be	would be / should be	managed	*by [Name].*
Conditional perfect	The portfolio(s)	would have been / should have been	would have been / should have been	managed	*by [Name].*

The second category of passive construction is passive verbals. Verbals are words or phrases that seem to carry the idea of action or being but do not function as true verbs. They are sometimes called 'non-finite' (unfinished or incomplete) verbs. There are three types of verbals which take on features of the passive voice: infinitive phrases in the passive voice, passive gerunds and passive participles. Table 6.2 illustrates.

Table 6.2
Passive verbals

1. Infinitive phrases in the passive voice

An infinitive phrase in the passive voice is formed by combining the infinitive form of the verb 'to be' (either in the present ('to be') or the past ('to have been')) with a past participle. Infinitive phrases in the passive voice can occur in different positions in the sentence e.g.

- Present: To be affected by adverse market conditions is a risk that must be accepted.
  The trust continues to be affected by adverse market conditions.

- Past: To have been affected by adverse market conditions was a risk that should have been anticipated.
  The trust's performance appeared to have been affected by adverse market conditions.

2. Passive gerunds

A gerund is a noun formed from a verb. Passive gerunds take two forms: 'being' followed by a past participle (the present) and 'having been' followed by a past participle (the past). Passive gerunds can occur in different positions in the sentence e.g.

- Present: Being affected by the adverse market conditions, the trust is changing its investment policy.
  The trust, being affected by the adverse market conditions, is changing its investment policy.

- Past: Having been affected by adverse market conditions, the trust experienced a downturn in performance.
  The trust, having been affected by adverse market conditions, experienced a downturn in performance.

Note:
The passive gerund always refers to the subject of the main clause. In the examples above, the subject is 'the trust', which is being or having been affected.

3. Passive participles

The passive gerund forms described above are often used without the auxiliaries ('being' and 'having been'), leaving only the past participle. These are referred to as passive participles. Passive participles can occur in different positions in the sentence e.g.

- Present: [~~Being~~] affected by the adverse market conditions, the trust is changing its investment policy.
  The trust, [~~being~~] affected by the adverse market conditions, is changing its investment policy.

- Past: [~~Having been~~] affected by adverse market conditions, the trust experienced a downturn in performance.
  The trust, [~~having been~~] affected by adverse market conditions, experienced a downturn in performance.

Based on these categories and definitions, the following rules for classification are developed.

Table 6.3
Transitivity: rules for classification

Rules for classification are established by the following question:

Does the t-unit contain:

A a passive verb

B a passive verbal

If the answer to either or both of these is 'yes', then the t-unit is categorised as passive.

Note: In a number of instances a passive verb will be immediately followed by a passive verbal in a relationship of mutual dependence. Typically, this occurs with a passive verb and an infinitive phrase in the passive voice (passive verbal). In such instances, the passive verb and the passive verbal should be treated as one passive construction. This is illustrated in Appendix 6A.3 for *t5* and *t7*.

Appendix 6A is a practical illustration of these rules in application for the text of two Chairman's statement narratives, taken from the empirical application reported in chapter 7. Text 1 (Trust Id. 'X' (Appendix 6A.1)) is included as a Chairman's

statement with a low transitivity score. This trust is categorised as a 'good performer' in the empirical application in chapter 7 (see Table 7.4). Text 2 (Trust Id. 'Q' (Appendix 6A.2)) is included as a Chairman's statement with a high transitivity score. This trust is categorised as a 'poor performer' in the empirical application (Table 7.4). Moreover, this text is selected because it contains a number of types of passive construction. Setting these texts side by side offers a useful comparative of the usage of verbal voice. Both of the texts are analysed by t-unit and the passive constructions highlighted. A detailed explanation of the analysis by t-unit is included as Appendix 6A.3, together with a summary of transitivity scores. Appendix 6A.3 also highlighted the differences between the manual and computerised approaches for the particular texts sampled.

6.2.3 Interpreting transitivity scores

While the use of passive constructions gives the text a veneer of objectivity or neutrality, and can be used by writers as a linguistic mechanism to disassociate themselves from the text, some caution must be observed in assuming that the use of passive constructions is a deliberate conscious impression management strategy employed by writers reporting 'bad news'. For example, as a genre, scientific writing is characterised by the use of passive voice (Swales, 1990). It may be that the writer of the text is influenced by that particular mode of writing, through educational or vocational experience. Also, a text of any significant length is likely to employ both active and passive constructions as an expected or normal mode of writing (Carter *et al.*, 1997, p. 223-5).

6.2.4 Satisfaction of assessment criteria: validity and reliability

As with the texture index (section 5.9) it is necessary that the transitivity index satisfies the recognised methodological assessment criteria identified in section 2.4 and Table 2.1. This requirement was articulated in the primary research question 1.4 (see Table 4.1 for an overall synthesis of research questions and Table 2.2 for the origin of this particular question). The specified assessment criteria are validity and reliability. The discussion below reflects on both the manual approach developed in this study and a computerised approach (transitivity scores reported in Microsoft Word, version 7.0).

Turning first to face validity as the fundamental validating criterion, it is necessary to demonstrate that the transitivity index measures what it purports to measure, namely transitivity. It has been demonstrated in this chapter, elaborated in terms of a theoretical

framework (section 6.2.1) and through detailed rules for application (section 6.2.2.3), that the manual transitivity index measures what it purports to measure. It is acknowledged that in analysing texts at the level of the t-unit some detail is lost in terms of the number of passive constructions in the t-unit or the mix of active and passive constructions. That said, the intention is to capture the passive character of the text and this loss of detail, while acknowledged as a limitation, is not considered of sufficient import to move from a t-unit to a clause based analysis at this stage. In discussing the framework of assessment criteria in chapter 2 (see in particular, section 2.4.2), the question of balance, in terms of attaining an acceptable degree of validity and reliability whilst taking all factors into account, was identified as an important factor. Since the transitivity index involves a manual coding of the text (discussed further below), it was considered that for the purposes of replication, a t-unit approach is most appropriate. Also, the method of analysis and quantification proposed here takes no account of whether or not the agent phrase is retained or omitted. This was identified in section 6.2.1 as potentially a particular impression management strategy that can be embraced through passive expression. These issues will be discussed further in section 8.3.3, where the potential for further development of the transitivity index is considered.

The further step of linking transitivity with impression management has been demonstrated (bearing in mind the caveats identified in section 6.2.3) through establishing a link between transitivity and systemic theory, which is concerned with how linguistic structures are exploited in strategic narrative construction (section 6.2.1). Also in section 6.2.1, the establishment of the link between transitivity and the attribution literature in accounting, strengthens face validity in this regard.

The strength of face validity is also dependent on the objectivity of the coding method and correct measurement specification. Given that the transitivity index developed in this study employs a manual coding approach, a degree of subjectivity is acknowledged. In order to address this issue and ensure that an acceptable degree of objectivity and thus validity is attained, detailed rules for application have been developed (section 6.2.2.3). The detailed practical illustration in Appendix 6A, together with the empirical application reported in chapter 7, have demonstrated these rules through application. In discussing the texture index in the context of the methodological assessment criteria (section 5.9), reference was made to Milne and Adler (1999) who explored in some detail the issue of inter-coder reliability in manual analysis. Through an experimental study, they observed a high degree of inter-coder reliability when using a sentence-

based coding instrument with detailed decision rules. The transitivity index, like the texture index, embraces a similar approach, namely a t-unit analysis with detailed rules for application.

It is recognised that a particular weakness of this study in relation to the manual approach, is the lack of demonstrated inter-coder reliability. This was considered necessary given the parameters of the study. In relation to the empirical contribution of the study, which is a secondary contribution, this factor is considered acceptable as an acknowledged limitation. A similar acknowledged limitation was noted with the texture index (section 5.9).

In considering the computerised approach, the objectivity of the coding method and correct measurement specification are strengths in terms of face validity. Face validity is weakened, however, in that the computerised readability statistics failed to code sentences sufficiently accurately. For example, it is clear from the median scores reported (see Appendix 6A.3, Table 7.11 and Appendices 7G.1 and 7G.2) that the manual approach is more comprehensive in its capture of passive constructions. When the narratives were manually coded to determine the transitivity scores, it was noted that a number of passive constructions were simply omitted from the computerised manual analysis. Moreover, these omissions were not systematic. Appendix 6A.3 illustrates. Four passive t-units were not categorised as passive in the computerised readability statistics. These relate to three instances of passive verbs (*t8* [past tense: imperfect], *t17* [past tense: perfect]; *t23* [present tense]) and one passive verbal (*t13* [passive participle]). If, for example, the computerised analysis systematically failed to identify only passive verbals, then an accurate quantification of passive verbs would provide a relative measure. The evident lack of systematisation in the capture of passives is, however, problematic for face validity.

Turning to issues of external validity, construct validity is concerned with the accuracy with which a particular construct is measured. Where two methods measure the same construct, external validity is evidenced (for both methods) when the results are replicated. A lack of replication is evidence of poor construct validity, for one or both methods. The empirical application in chapter 7 reports results using both manual and computerised approaches to quantifying transitivity (see section 7.7.3). A comparison of ranks for the set of Chairman's statement narratives for the manual and computerised approaches shows a significance level of $p = 0.778$ for a 2-way test. This is significant

at a 5 percent confidence level, where the critical value for the Spearman rank-order correlation coefficient is 0.648. This correlation is also reflected in the empirical application in a similarity in the significance levels of the differences between 'good performers' and 'poor performers' for both approaches. One must be cautious, however, of concluding on the basis of these results that the computerised model is a reliable proxy for the manual approach. As indicated in the discussion of face validity above, when the narratives were manually coded to determine the transitivity scores, it was noted that a number of passive constructions were simply omitted from the computerised manual analysis. Moreover, these omissions were not systematic. It is acknowledged that these inferences are based on the investigation of only one computerised measure of transitivity, namely the readability statistics contained in Microsoft Word (version 7.0). The investigation of similar readability statistics in other word-processing packages is not pursued. These matters are embraced in the context of reflections for further research (section 8.3.3).

Hypothesis validity, which is similar to face validity, is demonstrated through the empirical application reported in chapter 7. In others words, a relatively higher preponderance of passive constructions in the narratives of 'poor performers' is consistent with both systemic theory and attribution theory, thereby enhancing the hypothesis validity of the analysis (section 7.7.3 (see also, section 7.10)). As with the texture index, predictive validity is a matter for further research. For example, section 8.4 reflects on the potential for using the transitivity index, along with the other methods developed in this study, for bankruptcy prediction. Finally, in relation to issues of ecological validity, some caution would have to be observed in comparing different narratives and in inter-country comparisons. These caveats relate to the limitations identified in section 6.2.3.

It is recognised that satisfying validity concerns is not sufficient. The issue of reliability is also important. Reliability is concerned with the ability to replicate results, assessed in terms of stability and reproducibility. Much of the discussion above in relation to validity embraces these issues, since objectivity underlies both validity and reliability. Stability is largely a matter for further research (section 8.3.3). This study's principal concern is the establishment of the transitivity index in the accounting domain. While reproducibility has not been demonstrated in this study, the detailed rules for application developed provide strong support for the view that issues associated with reproducibility can be contained.

To summarise, the manual transitivity index described in this study has demonstrated validity, both in terms of face validity as the fundamental validating criterion, and in terms of external validity. Detailed rules for application, together with the illustrative analysis in Appendix 6A and the empirical application reported in chapter 7, point to an acceptable degree of reliability to move forward. The computerised transitivity index discussed here (Microsoft Word, version 7.0) has the attraction of objectivity and reliability. Weaknesses in terms of face validity, however, indicate that the computerised approach as it stands, while functioning as a guide to passive character, cannot be used with any degree of certainty as an analytical research tool.

6.3 *DICTION* analysis

DICTION analysis (Hart, 2000a) is a computerised content analysis programme that examines a text for semantic features. Verbal tone is measured in terms of five variables: 'certainty', 'optimism', 'activity', 'realism' and 'commonality'.

The application of *DICTION* analysis in Ober *et al.* (1999) was limited to the 'certainty' variable. As indicated in section 3.6.2, the objective of the study was to investigate how companies use certainty in their public business communications and, in particular, whether the use of certainty was a factor of the company's performance industry type or media of communication. Of particular relevance to the investigation of impression management in accounting narratives was the fact that no significant difference in the use of certainty was found in the narratives of 'good performers' when compared to 'poor performers'. As indicated in section 3.6.2, whether or not this is indicative of a self-serving, impression management strategy on the part of management, is a matter of interpretation.

Building on the accounting application in Ober *et al.* (1999), this study advocates the exploitation of the full range of analysis offered by *DICTION*. The analysis is therefore extended to encompass the variables 'optimism', 'activity', 'realism' and 'commonality'. In addition, section 6.3.4.1 suggests some refinements with regard to the analysis of 'certainty' in Ober *et al.* (1999). Also, following the publication of their study, an updated version of the software, *DICTION* 5.0 (Hart, 2000a), has been produced. Ober *et al.* (1999) used *DICTION* 4.0. The latest version, which is described here and used in the empirical application reported in chapter 7, incorporates a number of refinements, in particular the provision of comparative data (see Hart (2001) for a

discussion of these refinements). In describing *DICTION* analysis in the following sections, repetition of descriptive material in Ober *et al.* (1999) is, where possible, kept to a minimum.

The structure is as follows. Section 6.3.1 elaborates upon the linkage between aspects of the existing content analysis literature in accounting and linguistic semantics, the dimension of linguistic analysis, which provides the theoretical basis for *DICTION* analysis alongside applied systemic approach. Sections 6.3.2 to 6.3.6 provide a detailed description of *DICTION* analysis. Section 6.3.7 offers some reflections on developing the general model for accounting specific applications. Finally, in section 6.3.8 the approach is validated in the context of the framework of methodological assessment criteria specified in the accounting literature.

6.3.1 Theoretical framework

DICTION analysis can be regarded as a form-oriented thematic approach in the line of studies such as Abrahamson and Park (1994), Abrahamson and Amir (1996) and Smith and Taffler (2000) (section 2.3.2). In terms of the accounting literature, *DICTION* analysis perhaps finds its closest parallel in the form-oriented approach to thematic content analysis employed by Smith and Taffler (2000). In this study, a content analysis dictionary comprising 168 different keywords was constructed using the Oxford Concordance Program. Keywords were then categorised on the basis of a four-factor cognitive structure, based on Houghton's (1988) work on the measurement of connotative meaning in accounting. The resulting framework for analysis is reproduced in Table 6.4 below.

Table 6.4
Framework for form-oriented content analysis

Category	Classification	
Evaluative	Beneficial (positive achievement)	Adverse (negative occurrence)
Potency	Tangible (degree of certainty)	Intangible (vagueness)
Activity	Dynamic (measure of performance)	Static (reluctant action)
Manageability	Expected (status quo)	Unexpected (external factors)

[Source: Smith and Taffler (2000) Table 1. p. 627]

As noted in section 2.5.2, Smith and Taffler found that the form-based approach, which embraces the benefits of simplicity, automation and a reduction of judgemental input, yielded results that were similar to a more sophisticated thematic based subjective methodology.

As a form-oriented approach, *DICTION* offers considerable potential for the accounting researcher. It is simple to use, it is automated, and yet it embraces a considerable degree of sophistication. As indicated in section 2.3.2, while a form-oriented approach controls for judgemental input on the part of the researcher, a degree of judgement is required in the identification of keywords and in their categorisation. With *DICTION*, that judgmental input is not required of the accounting researcher, since the dictionaries have already been constructed by experts in linguistics. Moreover, the scope of *DICTION*, with a total word corpus in excess of 10,000, is considerably greater than existing form-oriented approaches in the accounting literature.

The dimension of linguistic analysis which provides the theoretical basis for *DICTION* is linguistic semantics. Linguistic semantics is a well-established field of study in linguistics (see e.g., Frawley, 1992; Lyons, 1995; Saeed, 1997). Like the other approaches developed in this study, these theoretical principles find expression in the applied orientation, in this case *DICTION* analysis. Like the other approaches developed in this study, *DICTION* falls within the scope of applied systemic linguistics (section 4.6 and Table 4.4). As a method of analysing semantic content, *DICTION* is well established in the applied linguistics literature. Empirical applications include Hart (1997b, 2000b), Hart and Gourgey (1998) and Hart and Jarvis (1997). Admittedly, these studies are the author's own published research and relate predominantly to the area of political discourse, but this does not detract from the acceptability of the approach. Moreover, the first version of *DICTION* to be made commercially available was *DICTION* 4.0 (Hart, 1997a). Ober *et al.* (1998) is one of the first studies to exploit this accessibility. Finally, the validity of *DICTION* as a computerised content analysis programme has been attested by independent research (e.g., Frey *et al.*, 1991; Morris, 1994; West, 2001). This is discussed further in section 6.3.8.

6.3.2 Basic unit of analysis

The basic unit of analysis in *DICTION* is a 500-word norm. The programme default is to generate one set of scores for the entire text (regardless of length) that allows comparison with texts of different lengths and with normative values, which are

reported on the basis of a 500-word norm (see section 6.3.5). Where the 500-word standard is the basic default for *DICTION*, a number of specific options are available to the researcher, depending on whether the text is less than 500 words or greater than 500 words.

Where a particular text is less than 500 words, *DICTION* offers two options. The default options is to make corrective counts, thereby standardising it to a 500-word basis. The second options reports raw scores.

When a text is more than 500 words, the researcher has three options. The default options is to generate a 500-word equivalent score. This is done by averaging its 500-word units together. For that part of the text that does not correspond to a 500-word unit, an extrapolation to a 500-word 'equivalent' then allows that section then to be included in the averaging process. *DICTION* also allows the researcher to analyse the first 500 words only of a text. Finally, the text can be segmented into 500-word units and each processed separately. This allow the researcher to investigate variability, for example, by comparing the first 500 words of a given text with the middle 500 words and the final 500 words.

6.3.3 *DICTION* variables

As indicated above, *DICTION* analyses verbal tone in terms of five variables: 'certainty', 'optimism', 'activity', 'realism' and 'commonality'. These are referred to as master variables. The master variables are constructed on the basis of thirty-one individual dictionary scores and four calculated variables. These are referred to respectively as component variables based on dictionary scores and calculated component variables. The dictionaries were constructed from the analysis of more than twenty thousand texts, which yield a total word corpus, taking the dictionary scores together, in excess of ten thousand. None of the search items is duplicated in the lists, allowing the researcher to gain a rich understanding of the particular text being analysed.

6.3.4 *DICTION* scores

The outputs for the thirty-one component variables based on dictionary scores are 'raw dictionary' totals, 'frequency' scores and 'percentage' scores. 'Raw dictionary' totals simply report the raw word count for a particular dictionary. 'Frequency' scores convert

the 'raw dictionary' totals to 500-word equivalents (section 6.3.2). 'Percentage' scores are 'frequency' scores expressed as a percentage, again based on the 500-word norm.

For the four calculated variables, *DICTION* simply reports the actual score. Since these variables are based on ratios, they do not have to be converted for comparative purposes. *DICTION* also refers to these as 'frequency' scores (Appendix 6B). For clarification, the empirical application in chapter 7 uses the term 'calculated' score to refer to those scores that are the product of calculated variables and reserves the term 'frequency' score for the output of dictionary-based component variables. The calculated variables are summarised in Table 6.5 below. This should be read in conjunction with the descriptions for the calculated variables included in Tables 6.6 to 6.10.

Table 6.5
***DICTION* calculated variables**

Variable	Computational ratio	Ref. for description
Insistence	$\frac{\text{No. of eligible words X sum of their occurrence}}{10}$	'Certainty' variable [Table 6.6]
Variety	$\frac{\text{Number of different words}}{\text{Number of total words}}$	'Certainty' variable [Table 6.6]
Embellishment	$\frac{\text{Number of adjectives}}{\text{Number of verbs}}$	'Activity' variable [Table 6.8]
Complexity	Average number of characters per word	'Realism' variable [Table 6.9]

The five master variables are computed by adding and subtracting the component variables according to prescribed formulae. Whether the component variable score is added or subtracted in determining the overall master variable is determined by what *DICTION* refers to as 'score valence'. Additive variables, with a positive score valence, are regarded as contributing to the creation of a marked verbal tone for the particular semantic feature. Subtractive variables, with a negative score valence, are regarded as detracting from the creation of a marked tone. For example, with the master variable 'certainty', the additive component variables include 'tenacity' and 'insistence', in

contrast to 'ambivalence' and 'variety', which are treated as subtractive variables (see section 6.3.4.1).

Because the scores for the component variables based on dictionary scores and the scores for calculated component variables are computed on a different basis, the outputs cannot be aggregated without standardisation. In computing the master variable scores, *DICTION* first converts the 'frequency' scores to z-scores. The z-scores are computed with reference to the mean score for the particular variable across the entire text-corpus upon which *DICTION* is based. This is referred to as the 'overall' text norm (section 6.3.5). In expressing the additive and subtractive variables as z-scores, the sum can give rise to a negative number. *DICTION* adds a constant of 50 to the sum of scores to eliminate negative numbers. In terms of the final output, a higher score is indicative of a more marked tone for the particular semantic feature. Ober *et al.* (1999) were able to use an aggregate of 'frequency' scores for the master variable, because they excluded the calculated variables 'insistence' and 'variety' from their analysis of 'certainty' (section 6.3.4.1). There was therefore no requirement to convert the data to z-scores prior to aggregation. It is recognised that there are potential problems in computing z-scores based on means derived from the 'overall' text norm. One approach to overcome this would be to construct z-scores independently of *DICTION* based on the mean 'frequency' scores for the texts analysed (section 6.3.7).

The output from *DICTION* is such that texts can be analysed from the higher level of the master variable scores to the lower level of the component variables (both component variables based on dictionary scores and calculated variables). A degree of caution must be observed, however, in interpreting the scores, particularly where the actual word counts are low. This matter will be discussed further in the context of the empirical application reported in chapter 7 (see in particular, sections 7.7.4 to 7.7.8).

Sections 6.3.4.1 to 6.3.4.5, provide a more detailed description of each of the master variables. For each variable, its appropriateness for accounting related applications is considered, with a particular orientation towards the investigation of impression management.

6.3.4.1 The 'certainty' score

Certainty is defined as 'language indicating resoluteness, inflexibility, completeness and a tendency to speak *ex cathedra*' (Hart, 2000a, p. 32). The 'certainty' score is

calculated from eight sets of standardised scores, comprising four additive variables ('tenacity', 'levelling terms', 'collectives' and 'insistence') and four subtractive variables ('numerical terms', 'ambivalence', 'self-reference' and 'variety'). Table 6.6 provides a detailed breakdown of the components of the 'certainty' score. For completeness, the definition of certainty and the certainty formula are included.

The appropriateness of this variable for accounting related applications has been demonstrated by Ober *et al.* (1999) in their investigation of the differential use of certainty expressions in the accounting narratives of 'good performers' and 'poor performers'. No significant difference was found between 'good performers' and 'poor performers'. As indicated in section 3.6.2, based on this observation, the researchers concluded that managers are even-handed in their delivery of 'good news' and 'bad news', that they 'tell it like it is, no matter whether profits have increased or decreased' (Ober *et al.*, 1999, p. 292). It may be, however, that a marked tone of certainty is in itself a self-serving strategy, adopted by 'poor performers' to imitate 'good performers'.

In computing the 'certainty' score, Ober *et al.* adjusted the 'certainty' formula in recognition of the specific dynamics of accounting narratives. The two subtractive variables 'numerical terms' and 'self-reference' were deleted from the original formula. 'Numerical terms' was deleted on the basis that 'such specificity in business communications is commonly considered to contribute to, rather than detract from certainty' (Ober *et al.*, 1999, p. 288). 'Self-reference' was deleted on the basis that such a style of writing 'promotes acceptance of responsibility for one's writing' (p. 288). In addition to these variables, they also deleted the calculated variables 'insistence' and 'variety', because of their inappropriateness for the analysis of the segmented oral text samples that formed part of their study (p. 288). As a feature of *DICTION*, the potential for adaptability of the general model to specific situations of application is seen as a particular strength. This is similar to the general-specific character of the texture index (sections 5.3.3 and 5.3.4). This potential for adaptability is discussed further in section 6.3.7 below. Table 6.6 describes the general 'certainty' formula, prior to any adjustment.

Table 6.6
DICTION 'certainty' score

Definition of 'certainty':	Language indicating resoluteness, inflexibility, and completeness and a tendency to speak *ex cathedra*.
'Certainty' formula:	['Tenacity' + 'Leveling' + 'Collectives' + 'Insistence'] **LESS** ['Numerical terms' + 'Ambivalence' + 'Self-reference' + 'Variety']

Component Category / Score type	*Effect on Certainty*	*Definition*
'Tenacity' Dictionary [37 words]	Additive	All uses of the verb 'to be' (is, am, will, shall) and three definitive verb forms (has, must, do) and their variants. These verbs connote confidence and totality.
'Leveling' Dictionary [137 words]	Additive	Verbs used to ignore individual differences and to build a sense of completeness and assurance. Included are totalising terms (everybody, anyone, each, fully), adverbs of permanence (always, completely, inevitably, consistently), and resolute adjectives (unconditional, consumate, absolute).
'Collectives' Dictionary [114 words]	Additive	Singular nouns connoting plurality that function to decrease specificity. These words reflect a dependence on categorical modes of thought. Included are social groupings, task groups and geographical entities.
'Insistence' Calculated variable	Additive	A measure of code restriction which calculates a text's dependence on a limited number of often repeated terms. The basis of the 'insistence' score, is that the repetition of key terms is indicative of 'semantic contentedness' or 'well-orderdness'. In calculating the score, *DICTION* identifies all words occuring three or more times. It then categories these words as eligible for the insistence score or exempt. Eligible words are nouns or noun-derived adjectives. In most instances, *DICTION* will be able to classify words based on its databases of eligible and exempt items. If the word is unknown to *DICTION*, it will highlight the word, asking the researcher to make a classification.

Component Category / Score type	*Effect on Certainty*	*Definition*
'Numerical terms' Dictionary [195 words]	Subtractive	Any sum, date, or product specifying the facts in a given case. This dictionary treats each isolated integer as a single 'word' and each separate group of integers as a single word. In addition, the dictionary contains common numbers in lexical format (one, tenfold, hundred, zero) as well as terms indicating numerical operations (subtract, divide, multiply, percentage) and quantitative topics (digitize, tally, mathematics). The presumption is that numerical terms hyper-specify a claim, thus detracting from its universality.
'Ambivalence' Dictionary [211 words]	Subtractive	Words expressing hesitation or uncertainty, implying a speaker's inability or unwillingness to commit to the verbalization being made. Included are hedges (allegedly, perhaps, might), statements of inexactness (almost, approximate, vague, somewhere) and confusion (baffled, puzzling, hesitate). Also included are words of restrained possibility (could, would) and mystery (dilemma, guess, suppose, seems).
'Self-reference' Dictionary [10 words]	Subtractive	All first-person references, which serve to 'index' a statement, thereby isolating the locus of action within the speaker and not in the world at large.
'Variety' Calculated variable	Subtractive	The ration of different words in a passage to total words, a high score indicating a preference for precise, molecular statements.

[Source: Based on Hart (2000a), *DICTION 5.0: The Text Analysis Program User's Manual,* Sage Publications Software, London, esp. pp. 32-3]

6.3.4.2 The 'optimism' score

Optimism is defined as 'language endorsing some person, group, concept or event or highlighting their positive entailments' (Hart, 2000a, p. 34). The 'optimism' score is calculated from six sets of standardised scores, comprising three additive variables ('praise', 'satisfaction' and 'inspiration') and three subtractive variables ('blame', 'hardship' and 'denial'). Table 6.7 provides a detailed breakdown of the components of the 'optimism' score. For completeness, the definition of optimism and the optimism formula are included. The 'optimism' formula described is the general formula.

The appropriateness of this variable for accounting related applications investigating impression management can be seen in the clear parallels between the component variables of the 'optimism' score and elements of the extant accounting literature. The negativity index used by Abrahamson and Park (1994) and Abrahamson and Amir

(1996) is similar (section 2.3.2). This index, based on the relative preponderance of positive and negative keywords is similar in design to the *DICTION* master variable, which is a composite of additive and subtractive variables.

Table 6.7
***DICTION* 'optimism' score**

Definition of 'optimism':	Language endorsing some person, group, concept or event or highlighting their positive entailments.
'Optimism' formula:	['Praise' + 'Satisfaction' + 'Inspiration'] **LESS** ['Blame' + 'Hardship' + 'Denial']

Component Category / Score type	*Effect on Certainty*	*Definition*
'Praise' Dictionary [195 words]	Additive	Affirmations of some person, group or abstract entity. Included are terms highlighting entrepreneurial qualities (successful, conscientious, renowned), and intellectual qualities (vigilant, reasonable).
'Satisfaction' Dictionary [315 words]	Additive	Terms associated with positive affective states.
'Inspiration' Dictionary [122 words]	Additive	Abstract virtues deserving of universal respect, including words isolating desirable moral qualities (faith, honesty, self-sacrifice). Social and political ideals are also included (success, progressivity).
'Blame' Dictionary [346 words]	Subtractive	Terms describing unfortunate circumstances (bankrupt, rash) or unplanned vicissitudes (detrimental).
'Hardship' Dictionary [470 words]	Subtractive	Terms describing hostile actions (bankruptcy, enemies), unstable political conditions, human fears (unemployment, apprehension, uncertainty) and incapacities (error, weakness).
'Denial' Dictionary [39 words]	Subtractive	A dictionary score consisting of standard negative contractions (aren't, shouldn't, don't), negative functions words (nor, not, nay), and terms designating null sets (nothing, nobody, none).

[Source: Based on Hart (2000a), *DICTION 5.0: The Text Analysis Program User's Manual,* Sage Publications Software, London, esp. p. 34]

6.3.4.3 The 'activity' score

Activity is defined as 'language featuring movement, change, the implementation of ideas and the avoidance of inertia' (Hart, 2000a, p. 34). The 'activity' score is calculated from seven sets of standardised scores, comprising four additive variables ('aggression', 'accomplishment', 'communication' and 'motion' and three subtractive variables ('cognitive terms', 'passivity' and 'embellishment'). Table 6.8 provides a detailed breakdown of the components of the 'activity' score. For completeness, the definition of activity and the activity formula are included. The 'activity' formula described is the general formula.

The appropriateness of this variable for accounting related applications investigating impression management is clear. A marked verbal tone for the semantic feature 'activity' is indicative of a company that is forward-looking, progressive, self-determining and controlling its own success. This is reflected in particular in the additive variables, 'aggression' and 'accomplishment'. The subtractive variables, 'passivity' and 'embellishment' in particular, are indicative of stasis, inactivity and the absence of a forward-looking orientation.

Table 6.8
***DICTION* 'activity' score**

Definition of 'activity':	Language featuring movement, change, the implementation of ideas and the avoidance of inertia.
'Activity' formula:	['Aggression' + 'Accomplishment' + 'Communication' + 'Motion'] **LESS** ['Cognition' + 'Passivity + 'Embellishment']

Component Category / Score type	*Effect on Certainty*	*Definition*
'Aggression' Dictionary [581 words]	Additive	A dictionary embracing human competition and forceful action. Its terms denote goal-directedness, physical energy and social domination. In addition, words associated with personal triumph and resistance are included.

Component Category / Score type	*Effect on Certainty*	*Definition*
'Accomplishment' Dictionary [375 words]	Additive	Words expressing task-completion (establish, finish, influence, proceed) and organized human behavior (motivated, influence, leader, manage). Includes capitalistic terms (buy, produce, employees, sell), modes of expansion (grow, increase, generate, construction) and general functionality (handling, strengthen, succeed, outputs). Also included is programmatic language: agenda, enacted, working, leadership.
'Communication' Dictionary [532 words]	Additive	Terms referring to social interaction, encompassing the media of interaction and the participants in the communicative process.
'Motion' Dictionary [456 words]	Additive	Terms denoting movement and physical processes.
'Cognitive terms' Dictionary [408 words]	Subtractive	Words referring to cerebral as opposed to physical processes. Included are modes of discovery (learn, deliberate, consider, compare) and what are referred to as 'three forms of intellection: institutional (invent, perceive, speculate, interpret), rationalistic (estimate, examine, reasonable, strategies), and calculative (diagnose, analyse, fact-finding).
'Passivity' Dictionary [413 words]	Subtractive	Words ranging from neutrality to inactivity. Includes terms of compliance, docility and cessation. Also contains words expressing inertness and disinterest.
'Embellishment' Calculated variable	Subtractive	A selective ratio of adjectives to verbs based on the conception that heavy modification 'slows down' a verbal passage by de-emphasising human and material action.

[Source: Based on Hart (2000a), *DICTION 5.0: The Text Analysis Program User's Manual,* Sage Publications Software, London, esp. pp. 34-5]

6.3.4.4 The 'realism' score

Realism is defined as 'language describing tangible, immediate, recognizable matters that affect people's everyday lives' (Hart, 2000a, p. 35). The 'realism' score is calculated from eight sets of standardised scores, comprising six additive variables ('familiarity', 'spatial awareness', 'temporal awareness', 'present concern', 'human interest' and 'concretedness') and two subtractive variables ('past concern' and 'complexity'). Table 6.9 provides a detailed breakdown of the components of the 'realism' score. For completeness, the definition of realism and the realism formula are included. The 'realism' formula described is the general formula.

The appropriateness of this variable for accounting related applications investigating impression management can perhaps best be understood in relation to the term 'obfuscation'. Typically, this term has been linked to readability scores (section 3.4.1), although in section 5.4.4 it was linked to the indexical 'connectivity'. Obfuscation is an impression management strategy, whereby management will seek to obfuscate bad news through the strategic exploitation of aspects of syntactic structure. With readability scores, the aspects of syntactic structure investigated are word length, word frequency and sentence length. With 'connectivity', the emphasis is on semantic linkage. Both these dimensions of obfuscation find parallels in the components of the *DICTION* 'realism' score. The subtractive calculated variable 'complexity', in measuring word length, draws on an aspect of the Flesch readability score (see table 6.9 below). Also, the overall emphasis of the 'realism' score on semantic tone builds on the semantic linkage investigated through the indexical 'connectivity'. The following prescription from the ASB in its statement *Operating and Financial Review* (ASB, 1993), captures the essence of the *DICTION* 'realism' variable. "It should be written in a clear style, and as succinctly as possible, to be readily understandable by the general reader of annual reports" (para. 3).

Table 6.9
DICTION 'realism' score

Definition of 'realism':	Language describing tangible, immediate, recognisable matters that affect people's everyday lives.
'Realism' formula:	['Familiarity' + 'Spatial terms' + 'Temporal terms' + 'Present concern' + 'Human interest' + 'Concretedness] **LESS** ['Past concern' + 'Complexity']

Component Category / Score type	*Effect on Certainty*	*Definition*
'Familiarity' Dictionary [44 words]	Additive	Consists of a certain number of what linguists refer to as 'operation' words, which are the most common words in the English language. Included are common prepositions (across, over, through), demonstrative pronouns (this, that) and interrogative pronouns (who, what), and a variety of particles, conjunctions and connectives (a, for, so).
'Spatial terms' Dictionary [364 words]	Additive	Terms referring to geographical entities, physical distances, and modes of measurement.
'Temporal terms' Dictionary [358 words]	Additive	Terms that fix a person, idea or event within a specific time-interval, thereby signalling a concern for concrete and practical matters.
'Present concern' Dictionary [269 words]	Additive	A selective-list of present-tense verbs used most commonly in English to express operational activity. The terms encompass task-performance, general physical activity and social operations.
'Human interest' Dictionary [150 words]	Additive	An adaptation of Rudolf Flesch's notion that concentrating on people and their activities gives discourse a life-like quality. Included are standard personal pronouns and generic terms.
'Concretedness' Dictionary [745 words]	Additive	A large dictionary expressing no thematic unity other than tangibility and materiality.
'Past concern' Dictionary [95 words]	Subtractive	The past-tense forms of the verbs contained in the 'present concern' dictionary.
'Complexity' Calculated variable	Subtractive	A simple measure of the average number of characters-per-word in a given input file. Borrows Rudolph Flesch's notion that convoluted phrasings make a text's ideas abstract and its implications unclear.

[Source: Based on Hart (2000a), *DICTION 5.0: The Text Analysis Program User's Manual,* Sage Publications Software, London, esp. pp. 35-6]

6.3.4.5 The 'commonality' score

Commonality is defined as 'language highlighting the agreed-upon values of a group and rejects idiosyncratic modes of engagement' (Hart, 2000a, p. 37). The 'commonality' score is calculated from six sets of standardised scores, comprising three additive variables ('centrality', 'co-operation' and 'rapport') and three subtractive variables ('diversity', 'exclusion' and 'liberation'). Table 6.10 provides a detailed breakdown of the components of the 'commonality' score. For completeness, the definition of commonality and the commonality formula are included. The 'commonality' formula described is the general formula.

The essence of 'commonality' encapsulated in the master and component variable definitions is of group identity as opposed to distinctiveness and individualism. On this basis, it might be inferred that 'good performers' would exhibit a less marked tone for 'commonality' than 'poor performers'. This would arise from their desire to set themselves apart from the group, emphasising their diversity and exceptional performance. In terms of impression management, a particular strategy for 'poor performers' might be to emphasise group identity so as to avoid isolation from the group.

While the appropriateness of the variables 'certainty', 'optimism', 'realism' and 'commonality' for accounting related applications investigating impression management is clear, the link is less clear for 'commonality'. While some links can be made, a degree of caution must be observed in interpreting 'commonality' scores in the context of impression management. Aside from the tentative links that can be made, the 'commonality' variable is also included here for completeness and because of its potential for use in accounting related applications beyond the investigation of impression management (section 8.4).

Table 6.10
DICTION 'commonality' score

Definition of 'commonality':	Language that highlights the agreed-upon values of a group and that rejects idiosyncratic modes of engagement.
'Commonality' formula:	['Centrality' + 'Co-operation' + 'Rapport'] **LESS** ['Diversity' + 'Exclusion' + 'Liberation']

Component Category / Score type	*Effect on Certainty*	*Definition*
'Centrality' Dictionary [401 words]	Additive	Terms denoting institutional regularities and/or substantive agreement on core values. Included are terms denoting typicality (standardised, matter-of-fact, regularity), terms of congruence (conformity, unanimous), predictability (expected, continuity, reliable), and universality (perennial, landmarks).
'Co-operation' Dictionary [473 words]	Additive	Terms denoting behavioural interactions among people that often result in a group product. Terms encompass personal (network, sharing, contribute) and neutral interactions (consolidate, mediate, alignment).
'Rapport' Dictionary [226 words]	Additive	This dictionary describes attitudinal similarities among groups of people. Included are terms of affinity, assent, deference and identity.
'Diversity' Dictionary [308 words]	Subtractive	Words describing individuals or groups of individuals differing from the norm. The distinctiveness carries either a neutral (inconsistent, contrasting) or a positive connotation (exceptional, unique, individualistic).
'Exclusion' Dictionary [375 words]	Subtractive	A dictionary describing the sources and effects of isolation.
'Liberation' Dictionary [350 words]	Subtractive	Terms describing the maximising of individual choice (autonomous, open-minded, options) and the rejection of convention.

[Source: Based on Hart (2000a), *DICTION 5.0: The Text Analysis Program User's Manual,* Sage Publications Software, London, esp. pp. 37]

6.3.5 Normative values

A distinctive feature of *DICTION* 5.0 is the availability of a number of normative values for comparative purposes. These normative values, reported in accordance with the 500-word equivalent default, are based on an analysis of more than twenty thousand

texts using the *DICTION* software (Hart, 2000a). The 'overall' text norm is divided into six groups and then further divided into thirty-six sub-groups. Of particular relevance to accounting researchers is the first group - 'business'. The six sub-groups under 'business' are 'corporate financial reports', 'corporate public relations', 'financial news', 'legal documents', 'magazine advertising' and 'TV advertising'. 'Corporate financial reports' consists of a sample of 48 annual financial reports from Fortune 500 companies. The texts analysed comprise the President's letter and sections of the MD&A. 'Corporate public relations' is a broad-based collection of official mission statements, public pronouncements and CEO speeches, again associated with Fortune 500 companies.

Normative values are reported as a normal range, representing scores at +1/-1 standard deviation from the mean for the normative grouping chosen. Table 6.11 gives the normal ranges for the 'overall' text norm and the sub-groupings, 'corporate financial reports' and 'corporate public relations'. The ranges are given only for the master variables. Appendix 6B has the 'corporate financial reports' normal range for the component variables. The 'corporate financial reports' comparative is reported in the empirical application in chapter 7.

Table 6.11
***DICTION* normative values**

Variable	Overall text norm (n = 22,027) [low – high]	Corporate financial reports (n = 48) [low – high]	Corporate public relations (n = 163) [low – high]
'Certainty'	46.90 – 51.96	38.62 – 50.26	48.44 – 52.71
'Optimism'	46.37 – 52.25	47.92 – 52.50	48.21 – 55.58
'Activity'	46.74 – 55.48	46.26 – 53.97	48.16 – 52.43
'Realism'	46.10 – 52.62	41.14 – 46.85	44.40 – 50.67
'Commonality'	46.86 – 52.28	47.94 – 55.30	48.40 – 54.08

Admittedly, the data sets that form the basis for these normative values can be relatively small, for example, the 'corporate financial reports' sub-group referred to above. A degree of caution, therefore, must be observed in making comparisons. Also, there are

potential problems in comparing data drawn from different geographical jurisdictions. Nevertheless, they do provide an interesting dimension for analysis and suggest a number of potential avenues for developing the model for accounting applications (see section 6.3.7).

6.3.6 Reporting *DICTION* scores

Appendix 6B is an example of a report produced from *DICTION*. This is the data for the Chairman's statement for one of the companies included in the empirical application in chapter 7 (trust 'D'). With the exception of the 'certainty' variable, scores for the master and component variables correspond to the data for 'trust D' in Appendices 7H-L. The 'certainty' scores differ because an adjusted 'certainty' formula is used in the empirical application (see section 6.3.7 for explanation).

Since the text analysed is greater than 500 words, the text has been averaged to a 500-word equivalent for comparative purposes (section 6.3.2). For each of the component variables based on dictionary totals, a 'frequency' score, 'percentage' score and 'standard' score (z-score) are reported. For the calculated variables, 'frequency' and 'standard' z-scores are reported. For a description of these scores see section 6.3.4.

The normative values (section 6.3.5) reported in Appendix 6B are the 'corporate financial reports' sub-class. The *DICTION* software highlights each instance where the frequency score in the text being analysed falls outwith this normal range. For example, in Appendix 6B, the actual frequency score for 'numerical terms' falls outwith the range and is highlighted.

DICTION will also report character counts and word counts and reproduce the input text in the report file. These features are not included in the report in Appendix 6B.

6.3.7 Developing the model for accounting applications

One of the characteristics of the texture index described in chapter 5 is that the general linguistic model must be converted to the specific situation of application. In this regard, sections 5.3.3 and 5.3.4 describe how the general linguistic definitions for the indexicals constituting the texture index are adapted for application to the Chairman's statement of investment trust companies. The adaptability of the approach to specific situations of application is seen as a particular strength of the texture index. A similar potential for adaptability is embraced by *DICTION* analysis. The potential for

adaptability relates both to the computation of master variable scores and to the word lists that give rise to the individual dictionary scores.

As indicated in section 6.3.4.1, in calculating the *DICTION* score for the expression of 'certainty', Ober *et al.* (1999) deleted four variables from the original formula: 'numerical terms', 'self-reference', 'insistence' and 'variety'. The deletion of the first two variables was based on the desire to adapt the formula in recognition of the specific character of accounting narratives. The deletion of the calculated variables 'insistence' and 'variety' was necessary because of the inappropriateness of using calculated variables with oral transcripts. Since these variables were not deleted on semantic grounds, they are not deleted from the 'certainty' formula used in the empirical application in chapter 7. The data investigated is continuous text, so there is no problem with using calculated variables. The application in chapter 7 also departs from Ober *et al.* in using standard z-scores to determine the master variable score. While acknowledging the potential limitations (see section 6.3.4), the application will rely on the standard z-scores generated by *DICTION*. The construction of z-scores independently of *DICTION* is considered as a matter for further research (section 8.3.4). Ober *et al.* were able to rely on accumulated 'frequency' scores, because they omitted the calculated variables from their 'certainty' formula (section 6.3.4.1).

In relation to the other master variables, the empirical application uses the original *DICTION* formulae. From a preliminary review, there do not appear to be any strong semantic grounds for making adjustments, although the potential for adaptability remains. It is important to note that, as well as deleting variables, they can be added. Perhaps somewhat surprisingly, the *DICTION* software does not accommodate formulae adjustments in terms of the reports produced. It is a simple process, however, to transfer the data for the component variables to a spreadsheet and apply the appropriate formula. The potential for adaptability beyond the 'certainty' formula is considered in section 8.3.4 as a matter for further research.

DICTION also allows the researcher to customise the word-lists that give rise to the existing variables and also to construct new word-lists and therefore, new variables. *DICTION* will produce an identical profile of scores for the customised variables as for the standard variables (see section 6.3.4). These customised scores can then be incorporated into adapted formulae for determining master variables. A number of possibilities arise here as a result of this flexibility. As it stands, the method, while

relevant to accounting-based applications, is not specifically oriented towards what might be referred to as accounting language. Section 6.3.5 and Table 6.11 noted the relatively small corpus of annual report narratives that are included in the text database and, by extension, the dictionary scores. This is borne out in the empirical application in chapter 7 with a relatively low word count for a number of the variables investigated. Further empirical studies using accounting data will enhance the linguistic relevance of *DICTION* for the analysis of accounting texts and provide more reliable data for comparative purposes. Also, the majority of the textual materials from which the standard *DICTION* word-lists are derived, are US based, using American English. A fruitful research project, but beyond the scope of this study, would be to scan the existing word-lists for such country specific usage and to adapt the dictionaries accordingly. These matters are considered further in section 8.3.4.

6.3.8 Satisfaction of assessment criteria: validity and reliability

As with the texture index (section 5.9) and the transitivity index (section 6.2.4), *DICTION* must be critically evaluated in relation to the methodological assessment criteria of validity and reliability.

The objectivity of *DICTION* analysis is a particular strength, both in relation to validity and reliability. Its automated nature, both for coding and quantification, renders it attractive as a research instrument. Focusing further on face validity, as the fundamental validating criterion, the overview of the approach presented in this chapter is indicative of strength in face validity. In particular, the specific theoretical basis of the approach in linguistic semantics, the fact that the approach is well established in the applied linguistics literature and the independent attestation of the approach all point to strength in face validity (section 6.3.1). Moreover, the establishment of the approach, albeit in a limited way, in the managerial business communications literature in the context of an accounting application, lends tangential support to the assessment of face validity articulated here.

In section 6.3.7, a number of issues were identified relating to the potential for developing the model for accounting applications. In particular, the potential for adaptability was identified in relation to the construction of master variables, the customisation of word-lists and the computation of z-scores independently of *DICTION*. Such adaptation has the potential to enhance face validity, since the method would be developed in the context of the specific dynamics of accounting narratives, taking into

account *inter alia,* particular features of accounting discourse or accounting language. At this stage only the 'certainty' formula has been adjusted (section 6.3.7). The potential for adjustments beyond this are considered as a matter for further research (section 8.3.4).

The further step of linking the constructs captured by *DICTION* analysis with impression management has been demonstrated by establishing a link between linguistic semantics, as the specific theoretical basis of *DICTION* analysis, and systemic theory, which is concerned with how linguistic structures are exploited in strategic narrative construction. Moreover, the link between existing form-oriented approaches in the accounting literature and aspects of impression management, is firmly established. The form-oriented approach used by Smith and Taffler (2000), identified in section 6.3.1 as analogous to *DICTION,* is a case in point.

Turning to external validity, construct validity would be investigated by comparing the results from *DICTION* with other form-oriented approaches in the literature, for example the method used by Smith and Taffler (2000). Again, this is considered as a matter for further research (section 8.3.4). Hypothesis validity, which is similar to face validity, is explored through the empirical application in chapter 7. In other words, the presence or absence of a marked verbal tone, depending on the particular construct under investigation, is consistent with systemic theory, thereby enhancing the hypothesis validity of the analysis (sections 7.7.4 to 7.7.8 (see also, section 7.10)). As with the texture index and the transitivity index, predictive validity is a matter for further research. For example, section 8.4 reflects on the potential for using *DICTION* analysis, along with the other methods developed in this study, for bankruptcy prediction. Finally, in relation to ecological validity, a degree of caution must be observed when applying the *DICTION* methodology (without adaptation to word-lists) to accounting narratives outwith the US context (discussed in section 6.3.7). The process of adaptation referred to above would strengthen ecological validity.

As indicated at the beginning of this section, a particular strength of *DICTION* is its reliability. This is particularly so with regard to reproducibility, which is concerned with the degree of coding correlation. Given the semantically based nature of the approach, a degree of caution is required, both when comparing results based on different versions of the software, and when investigating narratives over an extended time period, where idioms and terminology may have changed.

6.4 Summary and conclusions

This chapter has described two text-focused methods of evaluating accounting narratives: a manual approach for quantifying the number of passive constructions in a text (a transitivity index) and *DICTION* analysis, which analyses text for verbal tone. Both of these approaches satisfy the recognised methodological assessment criteria specified in the accounting literature. In light of the expressed intention in this study, namely to develop methods with a view to investigating impression management, both approaches give rise to reliable dependent variables, which can be used in tests of association and tests of differentiation.

Relating transitivity to the investigation of impression management was demonstrated through a justification of the approach both in terms of its basis in the applied linguistics and theoretical linguistics literatures, and by linking transitivity with those studies investigating patterns of causal reasoning and attribution in accounting narratives. Along with the texture index, the approach goes some way towards redressing the lack of emphasis on the syntactic dimension, exhibited in the existing portfolio of approaches. Detailed rules for application were developed and illustrated in the chapter using sample texts drawn from the empirical application reported in chapter 7. In addition to the manual approach developed here, the chapter has reflected on the computerised alternatives that are available as a dimension of the readability statistics found in most word-processing packages. While these approaches have the attraction of objectivity and reliability, weaknesses in terms of face validity suggest that computerised analysis, while functioning as a guide to passive character, cannot be used with any degree of certainty as an analytical research tool.

DICTION analysis has previously been exploited to a limited extent in the managerial business communications literature for the investigation of impression management in accounting narratives. Building on that limited preliminary application, this chapter has advocated the development of *DICTION* towards its full potential for accounting applications. Like the texture index and the transitivity index, *DICTION* has a sound basis in linguistics. As an applied approach, *DICTION* falls within the scope of applied systemic linguistics. The theoretical principles underlying the approach have their roots in linguistic semantics. *DICTION* has been widely used in the domain of applied linguistics and has been subject to independent attestation. *DICTION* adds to a portfolio of approaches in the accounting literature within the general category of form-oriented thematic content analysis. Such approaches have been used extensively to

investigate impression management in accounting narratives. *DICTION* offers considerable potential for the accounting researcher. The particular semantic variables embraced by the approach are particularly apposite for the investigation of impression management. It is simple to use, it is automated, and yet it embraces a considerable degree of sophistication. The dictionaries have been constructed by experts in linguistics. With a total word corpus in excess of 10,000, *DICTION* is considerably more comprehensive than existing form-oriented approaches in the accounting literature. Moreover, a particular feature of *DICTION*, like the texture index, is the inherent potential for adaptation and customisation, in recognition of the particular linguistic character of accounting narratives.

The further step of applying the methods in an accounting environment is demonstrated in chapter 7 through an illustrative empirical application.

Appendix 6A
Practical illustration of application of transitivity index

Due to copyright restrictions, the material for Appendix 6A is not included in this document. Further information can be obtained on application to the author of the thesis.

Appendix 6B
Report of *DICTION* scores
[produced by DICTION software]
Chairman's statement
[Text Id. 'D']

Total Words Analyzed:	903
Total Characters Analyzed:	5353
Average Word Size:	4.76
Number of Different Words:	416

Active Custom Dictionaries:

Character Counts:	(none)
View Character Counts:	No
View Word Counts:	No
Small File Option:	Report extrapolations
Large File Option:	Averaged (Analyze maximum 500,000 words)
Numeric File Name:	C:\PROGRAM FILES\DICTION\Data\Research.num
Use Comma Separator:	Yes
Print Input Text:	No
View Input Text:	Yes

Normative Values:

Class:	Business
Type:	Corporate Financial Reports

Standard Dictionary Totals:

Variable	Frequency	% of Words Analysed	Normal Range Low	Normal Range High	Standard Score	Out of Range
Numerical Terms	32.93	6.59	40.62	112.23	3.43	*
Ambivalence	6.53	1.31	0.00	6.16	-0.99	*
Self-reference	3.57	0.71	0.00	1.02	-0.42	*
Tenacity	34.18	6.84	5.47	18.86	0.32	*
Leveling Terms	3.98	0.80	0.42	7.17	-1.27	*
Collectives	13.21	2.64	2.05	13.70	0.76	
Praise	7.96	1.59	0.00	5.13	0.52	*
Satisfaction	4.60	0.92	0.00	1.99	0.47	*
Inspiration	6.60	1.32	0.00	7.14	0.05	
Blame	0.50	0.10	0.00	2.36	-0.79	
Hardship	1.24	0.25	0.00	3.78	-1.00	
Aggression	3.11	0.62	0.07	5.36	-0.53	
Accomplishment	23.92	4.78	18.72	43.11	1.02	
Communication	2.47	0.49	0.00	6.24	-0.94	
Cognition	7.61	1.52	2.03	10.26	-0.35	
Passivity	3.65	0.73	0.23	7.23	-0.48	
Spatial Terms	4.34	0.87	0.44	9.82	-0.98	
Familiarity	130.03	26.01	106.54	137.39	-0.17	
Temporal Terms	16.46	3.29	5.81	20.69	0.20	
Present Concern	3.74	0.75	1.06	8.54	-1.68	
Human Interest	14.18	2.84	0.00	12.10	-1.29	*
Concreteness	25.31	5.06	10.03	30.92	0.64	
Past Concern	5.36	1.07	0.00	3.85	0.68	*
Centrality	4.10	0.82	1.32	11.39	-0.08	
Rapport	0.00	0.00	0.00	2.27	-1.22	
Cooperation	6.86	1.37	4.74	18.12	0.61	
Diversity	0.50	0.10	0.00	3.53	-0.77	
Exclusion	7.08	1.42	0.05	7.90	2.28	
Liberation	0.50	0.10	0.00	1.39	-0.63	
Denial	2.00	0.40	0.00	6.18	-1.15	
Motion	1.12	0.22	0.00	3.29	-0.55	

Words for Insistence Score:

Word	Occurrences
AIM	3
APPROACH	4
ASSET	6
BEST	3
COMPANIES	7
COMPANY	11
EARNINGS	4
GOOD	4
GROWTH	4
INVESTMENT	3
MANAGERS	3
MARKET	4
NET	3
PAST	4
PRIVATE	4
SHARE	9
TRUST	6
VALUE	5
YEAR	8

Calculated Variables:

Variable	Frequency	Normal Range Low	Normal Range High	Standard Score	Out of Range
Insistence	62.72	111.39	341.91	0.05	*
Embellishment	1.07	-0.69	2.60	0.85	
Variety	0.47	0.29	0.52	-0.56	
Complexity	4.76	4.71	5.42	0.51	

Master Variables:

Variable	Score	Normal Range Low	Normal Range High	Out of Range
Activity	48.98	46.26	53.97	
Optimism	53.98	47.92	52.50	*
Certainty	48.41	38.62	50.26	
Realism	45.54	41.14	46.85	
Commonality	48.43	47.94	55.30	

CHAPTER 7

AN ILLUSTRATIVE ACCOUNTING APPLICATION

7.1 Introduction and overview of chapter

This chapter is an illustrative application using the text-focused methods developed in chapters 5 and 6.

In addition to satisfying the criteria of validity, objectivity and reliability, to be of use to accounting researchers, the methods developed in the study must be capable of being used in empirical applications. Given the orientation of the study, where the methods are developed expressly with a view to investigating impression management in accounting narratives, the methods must be capable of being used in empirical studies of that nature. This requirement is reflected in the primary research question 1.6 (see Table 4.1 for an overall synthesis of research questions and Table 3.2 for the origin of this particular question). Accordingly, the empirical application reported here reflects the research designs and research questions that characterise the extant empirical literature.

Since the primary purpose of this application is to illustrate the aptitude of the methods for investigating impression management, the intention is to illustrate data analysis across the range rather than to provide an exhaustive analysis. This is reflected in limiting the application of the texture index and the component variables for *DICTION* to an investigation of the Chairman's statement.

In addition to the primary methodological contribution, the chapter also makes an empirical contribution to the impression management literature, through an investigation of differential reporting practices in the narratives of 'good performers' and 'poor performers'. The focus of the empirical application is reflected in the secondary research question 2.1 (Tables 4.1 and 3.2). For a number of the textual dimensions investigated, the empirical analysis is extended beyond the Chairman's statement to include the 'OFR-type' Manager's report. This responds to a call in the literature to extend the scope of investigative studies to embrace the emerging accounting narratives. Moreover, the focus on UK companies is in response to a lack of focus on the UK context in the extant accounting literature (sections 3.7 and 3.9). The analysis of the Chairman's statement and the Manager's report invites the investigation

of differentiation between different accounting narratives, reflected in the secondary research question 2.2 (Tables 4.1 and 3.2).

It is important at the outset to acknowledge a number of limitations with regard to the empirical contribution. The primary purpose of this chapter is methodological. This is reflected in the selection of a particular sector of investment trust companies as the data source (see section 4.8 and relevant sub-sections). Two limiting factors are evident with regard to empirical analysis. First, the small sample sizes, exhibited in particular in the sets of 'good performers' and 'poor performers', are a limiting factor in drawing conclusions. Second, the relative proximity in terms of financial performance between companies at the extremities of the sets of 'good performers' and 'poor performers', means that the investigation of differentiation is across a narrow range of performance. Typically, differentiation studies in the accounting literature compare companies exhibiting significant differences in performance and profitability. Comparing *extremely* successful with *extremely* unsuccessful companies, may give rise to more discernible differences in narrative disclosures than comparing 'good performers' and 'poor performers' across a narrow spectrum.

The structure of the chapter is as follows. The methods (section 7.2), data selection (section 7.3), research design (section 7.4), questions and hypotheses (7.5) and statistical methods (section 7.6) used in the application are described. The results of the empirical analysis are reported in sections 7.7 and 7.8 and discussed in detail for each method. Section 7.9 provides an overview of the results, contextualizing the findings in the context of the impression management literature, both in relation to the literature whose focus is accounting narratives and a broader impression management literature. Section 7.10 concludes on the outstanding methodological assessment criteria identified in chapters 5 and 6 and addressed in this chapter. Section 7.11 summarises and concludes.

7.2 Research methods

The research methods illustrated in this application are the texture index described in chapter 5 and the transitivity index and *DICTION* analysis described in chapter 6.

As indicated in section 5.6, for the texture index the application exploits only the vertical summation of indexical scores. The analysis of horizontal patterns of texture is

beyond the scope of this study, although the potential for analysis in that regard is discussed in section 8.4.

As indicated in section 6.3.7, the application of *DICTION* uses an adapted 'certainty' formula. The other variables are investigated using the original *DICTION* formulae. For the component variables based on dictionary scores 'frequency' scores are reported. For the calculated component variables, 'calculated' scores are reported (section 6.3.4). Scores for master variables are based on aggregated z-scores. The z-scores generated by *DICTION* are used here. All scores are based on texts standardised to 500-word equivalents. For texts greater than 500 words, the averaging option is used (section 6.3.2).

As indicated in section 5.5, in addition to the texture index, the transitivity index and *DICTION* analysis, Flesch readability scores are also computed. The principal reason for the inclusion of Flesch readability scores is that the texture index or indexical approach is developed expressly as an alternative to readability formulas. It has already been demonstrated (section 5.5) that the indexicals offer information about the text which is not captured by readability scores. The following section provides a brief overview of the Flesch readability formula.

7.2.1 Flesch readability formula

As already indicated in section 5.5, the selection of the Flesch readability formula, as opposed to other readability formulas, is based on its prevalence in readability research. The Flesch formula is: Reading Ease = $206.835 - 0.846wl - 1.015sl$, where *wl* equals the number of syllables per 100 words and *sl* equals average sentence length. The lower the score, the more difficult the narrative is to read. Conventionally, Flesch scores from 0-30, 30-50, 50-60 and 60-70 are termed 'very difficult', 'difficult', 'fairly difficult' and 'standard', respectively. The Flesch readability scores presented in this empirical application are as reported by a standard word-processing package. Before applying the formula, some degree of text standardisation is necessary so as to ensure comparability of scores. This is because the Flesch formula measures the number of syllables in words and hence the scores are significantly affected by polysyllabic names of companies, divisions and products etc., use of "£ million" compared with "£m", "percent" compared with "%" and "pence" compared with "p" etc. The texts are standardised using the single syllable word "name" for all companies, divisions and products and the notations "£m", "%" and "p". The necessity to standardise has been

demonstrated in prior research. Sydserff and Weetman (1999) for example, observed a significant increase in scores following standardisation (Table IV on p. 474).

Also, there is a weakness particular to the Microsoft Word Flesch option that is reported here. If the text contains a number of full stops as part of an abbreviation (for example, A.I.T.C.), the computer programme recognises this as four sentences and therefore distorts the sentence length component of the overall score. Accordingly, the texts are reviewed and adjusted as appropriate so as to avoid such distortion.

The other methods employed in this empirical application (namely the texture index, the transitivity index and *DICTION* analysis) analyse the actual text.

7.3 Data selection

The data used in this empirical application are the Chairman's statement and Manager's report of a particular sub-category of the investment trust industry sector - 'Smaller Companies: UK'. The rationale for selecting this particular data source for the empirical application was discussed in detail in section 4.8. The inclusion of this material in chapter 4 was necessary, because the methods described in chapters 5 and 6 were illustrated using data from this application. The texture index in particular, was developed specifically with a view to investigating impression management in the Chairman's statement of investment trust companies.

7.3.1 Summary of data collected and analysed

For each of the twenty-seven trusts in the sector, a written request was made in April 2000 for the latest annual report. After a number of follow-up enquiries, twenty-six trusts responded with a copy of their annual report. The period of coverage in terms of the accounting year-ends of the annual reports received was from 5th April 1999 to 31st March 2000. Appendix 7A summarises the data collected.

Table 7.1 summarises the narratives that are analysed for each method. As already indicated, given the illustrative nature of the application, the intention is to illustrate data analysis across the range, rather than to provide an exhaustive empirical analysis. Accordingly, the texture index and the component variables for *DICTION* analysis are applied only to the Chairman's statement. For each method identified in the table below, the relevant section in the text is indicated.

Table 7.1
Summary of narratives analysed by research method

Research Method	Relevant section	Table
Flesch readability scores:		
Differences between 'good performers' and 'poor performers' [CS and MR]	7.7.1	7.9
Differences between CS and MR of 'good performers'	7.8.1	7.9
Differences between CS and MR of 'poor performers'	7.8.2	7.9
Differences between CS and MR [total sample]	7.8.3	7.22
Texture index:		
Differences between 'good performers' and 'poor performers' [CS]	7.7.2	7.10
Transitivity index:		
Differences between 'good performers' and 'poor performers' [CS and MR]	7.7.3	7.11
Differences between CS and MR of 'good performers'	7.8.1	7.11
Differences between CS and MR of 'poor performers'	7.8.2	7.11
Differences between CS and MR [total sample]	7.8.3	7.22
***DICTION* analysis [master variables]:**		
Differences between 'good performers' and 'poor performers' [CS and MR]	7.7.4-8	7.12, 7.14, 7.16, 7.18, 7.20
Differences between CS and MR of 'good performers'	7.8.1	As above
Differences between CS and MR of 'poor performers'	7.8.2	As above
Differences between CS and MR [total sample]	7.8.3	7.22
***DICTION* analysis [component variables]:**		
Differences between 'good performers' and 'poor performers' [CS]	7.7.4-8	7.13, 7.15. 7.17. 7,19, 7.21

7.4 Research design

In section 4.7 the research designs that characterise the extant empirical literature were discussed. This empirical application reflects what was identified as the dominant research design that characterises much of the empirical literature, namely the investigation of differences between the narratives of 'good performers' and 'poor performers'.

7.4.1 Differentiation between 'good performers' and 'poor performers'

Tests of differentiation are used to search for differences in the narrative disclosures of 'good performers' and 'poor performers'. In terms of the construction of the research design, scores for the particular characteristics or textual dimensions of the narratives measured by the different methods are compared between sets of 'good performers' and 'poor performers'. Sets of 'good performers' and 'poor performers' are determined on the basis of performance ranks. The performance measures upon which the performance ranks are based are described in section 7.4.2.

7.4.2 Performance measure: net asset value (NAV) total return

An external performance measure is used in this application. In addition to the attractiveness as a research instrument of using an external, independently determined relative performance measure (section 4.8.2.3), there is considerable variation in the performance statistics provided by the trusts themselves, which would render problematic a comparative analysis based on data disclosed in the trust reports.

The performance measure used is net asset value (NAV) total return. This is the industry norm for performance comparison of investment trusts, used both by the trusts themselves, in monitoring their performance against a designated benchmark index and by external sources, which provide comparative performance statistics for particular sectors.

Appendix 7B is an example of a schedule derived from the AITC monthly statistics for a particular month, in which the year-ends of four of the trusts included in the sample fall. In all, twelve schedules were prepared to cover the year-ends of all the trusts included in the sample. For the trust with the 5th April year-end, the performance data for the preceding month (31st March 1999) are included. Each monthly schedule shows the NAV total return for each trust over 1 year, 3 years and 5 years at that particular month-end reporting date. The performance of each trust relative to the sector is shown

in terms of a performance rank. For each month, the particular trust(s) with a year-end in that month are highlighted.

Currently, the AITC statistical data is only available to subscribers in hard copy format. Accordingly, the information had to be transposed into electronic form for statistical manipulation (an example is included as Appendix 7B). This schedule, however, is not simply a repetition of the AITC data. The AITC statistics simply disclose for each trust the NAV return on a notional £100 over 1 year, 3 years and 5 years, with average figures for additional comparison. There is no *explicit* disclosure of the trust's performance relative to the sector, for example, in a performance rank. Accordingly, the data in Appendix 7B is *re*-presented in a form to facilitate the determination of performance ranks, where each trust's performance relative to the sector is disclosed. Second, in a small number of instances, where a data item was missing from the AITC's monthly prints, the average of the previous and following month is taken. Any remaining instances where no data are included are due to the date of the launch of the trust, such that 3 or 5 year (as appropriate) performance statistics are not applicable.

7.4.3 Compiling performance ranks

Two performance ranks are constructed. 'Rank 1' is based on NAV total return over 1 year (section 7.4.3.1). 'Rank 2' is based on an amalgam of NAV total return over 1 year, 3 years and 5 years (section 7.4.3.2). These ranks can be described as, respectively, a short-term performance ranking and a longer-term performance ranking. Determining two performance ranks was on the advice of a prominent member of the AITC, whose assistance is recorded in the acknowledgements section of the study (p. xiii). His contention is that analysts will look both to the recent performance of the trust and also to its longer-term performance, taking the three measures together. The performance ranks are summarised in Table 7.2.

Table 7.2
Summary of performance ranks

Trust Id.	**'Rank 1'** NAV 1 Yr. [Note 1]	**'Rank 2'** NAV Ave. [Note 2]
A	**19**	**15**
B	**24**	**24**
C	**4**	**5**
D	**1**	**1**
E	**16**	**20**
F	**12**	**8**
G	**3**	**3**
H	**11**	**12**
I	**1**	**2**
J	**24**	**21**
K	**18**	**16**
L	**4**	**4**
M	**20**	**10**
N	**7**	**9**
O	**19**	**13**
P	**9**	**10**
Q	**26**	**19**
R	**13**	**7**
S	**16**	**18**
T	**6**	**17**
U	**26**	**23**
V	**19**	**13**
W	**26**	**25**
X	**10**	**6**
Y	**22**	**22**
Z	**24**	**26**

Notes:
1. Data is extracted from Appendix 7C [Col. 3].
2. Data is extracted from Appendix 7D [Col. 7].

Table 7.3
Correlation matrix for performance ranks

	NAV 1 Yr. **'Rank 1'**
NAV Ave. **'Rank 2'**	**0.865***

Note:
*Significant at 5 per cent confidence level; Spearman's rank-order correlation coefficient is used to provide a correlation matrix for ranks. The critical value for the Spearman rank-order correlation coefficient is 0.648 at 5 per cent confidence level for a 2-way test. The null hypothesis that there is no association is tested against the alternative hypothesis that there is association, either positive or negative (Siegel and Castellan, 1988, pp. 242 and 360).

7.4.3.1 'Rank 1'

Appendix 7C details the construction of 'Rank 1'. For each trust, its performance relative to the sector (expressed as a rank) was determined on the basis of NAV total return over 1 year. Due to the fact that the twelve-month reporting periods covered by the trust reports in the sample were not identical, the performance of a particular trust was specifically its performance relative to the sector for its reporting period. It is logical to determine the ranked performance of a trust relative to the sector at the particular reporting date of the trust, since that is the period covered by the reports from which the narratives are extracted.

7.4.3.2 'Rank 2'

As indicated in section 7.4.3, performance 'Rank 2' is based on an amalgam of NAV total return over 1 year, 3 years and 5 years. The performance rank of the particular trust relative to the sector for 3 year and 5 year return was, in common with the 1 year return, based on the trust's relative performance at its year-end accounting date. For trusts for which 5 year performance data was not applicable, typically because of the launch date of the trust, the 3 year performance rank was assigned, unless as was the case with one trust, a 5 year rank was available within the reporting period. Finally, the three performance ranks based on month-end statistics were averaged to give a longer-term performance rank taking account of all three measures. There are a number of recognised limitations of this weighted average method. In particular, there is an element of double counting, in that the one year performance is included in the 3 year performance and both the 1 year and 3 year performances are included in the 5 year performance.

Table 7.3 shows a significant correlation between 'Rank 1' and 'Rank 2', which might be expected. There are, however, a number of differences between the sets of 'good performers' and 'poor performers', based on 'Rank 1' and 'Rank 2' respectively (section 7.4.4 and Table 7.4).

Further research questions would be to test the assertion that averaging is a proxy for perception and to run statistical tests on the 1 year, 3 year and 5 year ranks separately. As already indicated, however, the application in this study is illustrative in nature and these issues can reasonably be left for further research.

7.4.4 Determining sets of 'good performers' and 'poor performers'

Based on 'Rank 1' and 'Rank 2', sets of 'good performers' and 'poor performers' are identified. For each performance rank, the top ten and bottom ten trusts are categorised as 'good performers' and 'poor performers' respectively. The rationale for comparing sets of ten is so as to provide a degree of differentiation while acknowledging the relatively small total sample size of 26 trusts. Table 7.4 details the trusts in rank order for the purposes of determining these sets. Where more than one trust has been assigned an identical performance rank, a consistent approach has been followed for including / excluding these trusts from the sets. These adjustments are detailed in sections 7.4.4.1 and 7.4.4.2.

Table 7.4
Sets of 'good performers' and 'poor performers'

'Rank 1'			'Rank 2'	
Trust Id.	NAV 1 Yr. *[Note 1]*		Trust Id.	NAV Ave. *[Note 2]*
D	**1**		D	**1**
I	**1**		I	**2**
G	**3**		G	**3**
C	**4**		L	**4**
L	**4**		C	**5**
T	**6**		X	**6**
N	**7**		R	**7**
P	**9**		F	**8**
X	**10**		N	**9**
H	**11**		M	**10**
F	**12**		P	**10**
R	**13**		H	**12**
E	**16**		O	**13**
S	**16**		V	**13**
K	**18**		A	**15**
A	**19**		K	**16**
O	**19**		T	**17**
V	**19**		S	**18**
M	**20**		Q	**19**
Y	**22**		E	**20**
B	**24**		J	**21**
J	**24**		Y	**22**
Z	**24**		U	**23**
Q	**26**		B	**24**
U	**26**		W	**25**
W	**26**		Z	**26**

Shaded areas indicate the sets of 'good performers' and 'poor performers' derived from the respective performance ranks.

Notes:
1. Data is extracted from Appendix 7C [Col. 2].
2. Data is extracted from Appendix 7D [Col. 6].

7.4.4.1 'Set 1' [based on performance 'Rank 1']

Based on 'Rank 1', the top ten trusts were categorised as 'good performers' and the bottom nine as 'poor performers'. These trusts are highlighted in Table 7.4. The number of 'poor performers' is reduced, because a number of trusts at the border for 'poor performers' share an identical rank. Also, for one of the 'poor performers' (trust 'Y'), the annual report did not include a Manager's report.

In summary, the sample sizes based on 1 year NAV total return ('Rank 1') are ten trusts for 'good performers' (both Chairman's statement and Manager's report) and eight and seven trusts for 'poor performers' (for Chairman's statement and Manager's report, respectively). This trusts categorised as 'good performers' and 'poor performers' based on 'Rank 1', are referred to as 'Set 1'.

7.4.4.2 'Set 2' [based on performance 'Rank 2']

Based on 'Rank 2', the top nine trusts were categorised as 'good performers' and the bottom ten as 'poor performers'. These trusts are highlighted in Table 7.4. The number of 'good performers' is reduced because two trusts at the border for 'good performers' share an identical rank. In common with 'Set 1', trust 'Y' is included as a 'poor performer'. The annual report of this trust did not include a Manager's report.

In summary, the sample sizes based on an average of 1 year, 3 year and 5 year NAV total return ('Rank 2') are nine trusts for 'good performers' (both Chairman's statement and Manager's report) and ten and nine trusts for 'poor performers' (for Chairman's statement and Manager's report, respectively). The trusts categorised as 'good performers' and 'poor performers' based on 'Rank 2' are referred to as 'Set 2'.

7.4.5 Controlling for size

The size factor was investigated by comparing the total assets under management for the sets of 'good performers' and 'poor performers'. The figure for assets under management was taken at the year-end of the particular trust. Table 7.5 summarises the data. Significant differences are observed at the five percent level for performance measure 1 (the *p* value for performance measure 2 was 0.1309). Differences between the sets of 'good performers' and 'poor performers' arise principally because of the inclusion in the sets of 'poor performers' (for both performance measures), four trusts whose assets under management were in excess of £200 million (trust 'B' (£252 million), 'Q' (£209 million), 'Y' (£207 million) and 'Z' (£382 million)). None of the 'good performers' have assets under management in excess of £200 million. Tests of differences were run having removed trust 'Z' from the sets of 'poor performers', giving *p* values of 0.0710 and 0.2164 respectively. Notwithstanding the narrowing of the difference, no adjustments to the sets are made to control for size. The rationale for this decision is the relatively small number of trusts included in the sets of 'good performers' and 'poor performers' and the adjustments already made as detailed in sections 7.4.4.1 and 7.4.4.2.

Table 7.5
Controlling for size factor

	Total assets (£m) [medians]	
	'good performers'	'poor performers'
Performance measure 1:	77 [1]	171
Performance measure 2:	79	124

Results:

[1] Significant difference between 'good performers' and 'poor performers' at the 5% level (p = .0368).

7.5 Research questions and hypotheses

The research questions investigated in this empirical application mirror the research design described in section 7.4.1, namely tests of differentiation. Two perspectives on differentiation are investigated: first, what can be regarded as the dominant research question, the differentiation between 'good performers' and 'poor performers' (section 7.5.1); and second, differentiation between the Chairman's statement and the Manager's report (section 7.5.2). Section 7.5.3 describes the hypotheses for testing derived from these research questions. Tables 7.6, 7.7 and 7.8 summarise.

7.5.1 Differentiation between 'good performers' and 'poor performers' ['Set A'].

As indicated in section 3.8, a generic research question might be stated as follows: are the narratives of 'good performers' and 'poor performers' systematically different? This generic question finds expression in research question 2.1 (Table 4.1). For purposes of clarity, it is more helpful to use question 2.1 as a referent for the generic question.

[A] Are the corporate annual report narratives (Chairman's statement and Manager's report) of 'good performing' and 'poor performing' UK investment trust companies systematically different?

This research question is investigated for each of the dimensions of narrative construction captured by the methods developed in this study. For texture analysis, only the Chairman's statement is investigated. For *DICTION* analysis, the master variables are investigated for both the Chairman's statement and the Manager's report, while the

component variables are investigated only for the Chairman's statement. This selectivity is consistent with the overall aim of the empirical application, which is to illustrate data analysis across the range, rather than provide an exhaustive analysis. The set of specific research questions that is derived from the application of the generic question identified above is referred to as 'Set A' (Table 7.7).

7.5.2 Differentiation between Chairman's statement and Manager's report ['Set B']

The second perspective on differentiation is concerned with differences between the Chairman's statement and the Manager's report. Research question 2.2 (Table 4.1) can be used as the generic question.

[B] Are the Chairman's statement and Manager's report of UK investment trust companies systematically different?

The data analysis offers three slants on differentiation between the Chairman's statement and the Manager's report:

[B.1] Are the Chairman's statement and Manager's report of 'good performers' systematically different?

[B.2] Are the Chairman's statement and Manager's report of 'poor performers' systematically different?

[B.3] Are the Chairman's statement and Manager's report systematically different [total sample]?

These questions are investigated only for Flesch readability scores, transitivity scores and *DICTION* master variables. Since texture analysis was only employed with the Chairman's statement, these supplementary research questions do not encompass texture analysis. The sets of questions that are derived are referred to as 'Sets B.1, B.2 and B.3' respectively (Table 7.8).

7.5.3 Expression of hypotheses

Based on the research questions developed in section 7.5.1 and 7.5.2, sets of hypotheses are tested. For each dimension of narrative construction evaluated, the null hypothesis that there is no significant difference between the narratives of 'good performers' and 'poor performers' was tested against the alternative hypothesis that there is a significant

difference, either positive or negative. As with the research questions above, hypotheses are stated here in generic terms. Table 7.6 summarises.

Table 7.6
Research hypotheses

'Set A' [Corresponding to research questions 'Set A']

HA_o There is no significant difference in [scores for particular textual dimension investigated] for the Chairman's statement / Manager's report of 'good performers' and 'poor performers'.

HA_A There is a significant difference in [scores for particular textual dimension investigated] for the Chairman's statement / Manager's report of 'good performers' and 'poor performers'.

'Set B.1' [Corresponding to research questions 'Set B.1']

$HB.1_o$ There is no significant difference in [scores for particular textual dimension investigated] for the Chairman's statement and Manager's report of 'good performers'.

$HB.1_A$ There is a significant difference in [scores for particular textual dimension investigated] for the Chairman's statement and Manager's report of 'good performers'.

'Set B.2' [Corresponding to research questions 'Set B.2']

$HB.2_o$ There is no significant difference in [scores for particular textual dimension investigated] for the Chairman's statement and Manager's report of 'poor performers'.

$HB.2_A$ There is a significant difference in [scores for particular textual dimension investigated] for the Chairman's statement and Manager's report of 'poor performers'.

'Set B.3' [Corresponding to research questions 'Set B.3']

$HB.3_o$ There is no significant difference in [scores for particular textual dimension investigated] for the Chairman's statement and Manager's report [total sample].

$HB.3_A$ There is a significant difference in [scores for particular textual dimension investigated] for the Chairman's statement and Manager's report [total sample].

Tables 7.7 and 7.8 provide an overall summary of the research questions and related hypotheses. Table 7.7 relates to 'Set A' and table 7.8 to 'Set B'. These identification tables are used as the basis for reporting the results of the empirical analysis in section 7.7 below.

Table 7.7
Summary identification table for research questions / hypotheses ['Set A']

Textual dimension investigated	CS	MR
Readability:		
Flesch readability scores	A.1.1	A.1.2
Texture:		
Overall 'texture' scores	A.2.1	
Indexical score for 'topicality'	A.2.2	
Coverage of 'main topics'		
Main topic 'A'	A.2.3.1	
Main topic 'B'	A.2.3.2	
Main topic 'C'	A.2.3.3	
Main topic 'D'	A.2.3.4	
Main topic 'E'	A.2.3.5	
Supporting statements	A.2.3.6	
Indexical score for 'intertextuality'	A.2.4	
Indexical score for 'conjunction'	A.2.5	
Indexical score for 'connectivity'	A.2.6	
Indexical score for 'specificity'	A.2.7	
Indexical score for 'shift'	A.2.8	
Transitivity:		
Transitivity score: manual analysis	A.3.1	A.3.2
Transitivity score: computerised analysis	A.3.3	A.3.4
***DICTION* scores:**		
Certainty score: master variable	A.4.1	A.4.2
Certainty score: component variables		
Additive variable 1: 'tenacity' score	A.4.3.1	
Additive variable 2: 'leveling' score	A.4.3.2	
Additive variable 3: 'collectives' score	A.4.3.3	
Additive variable 4: 'insistence' score	A.4.3.4	
Subtractive variable 1: 'ambivalence' score	A.4.3.5	
Subtractive variable 2: 'variety' score	A.4.3.6	
Optimism score: master variable	A.5.1	A.5.2
Optimism score: component variables		
Additive variable 1: 'praise' score	A.5.3.1	
Additive variable 2: 'satisfaction' score	A.5.3.2	
Additive variable 3: 'inspiration' score	A.5.3.3	
Subtractive variable 1: 'blame' score	A.5.3.4	
Subtractive variable 2: 'hardship' score	A.5.3.5	
Subtractive variable 3: 'denial' score	A.5.3.6	
Activity score: master variable	A.6.1	A.6.2
Activity score: component variables		
Additive variable 1: 'aggression' score	A.6.3.1	
Additive variable 2: 'accomplishment' score	A.6.3.2	
Additive variable 3: 'communication' score	A.6.3.3	
Additive variable 4: 'motion' score	A.6.3.4	
Subtractive variable 1: 'cognitive terms' score	A.6.3.5	
Subtractive variable 2: 'activity' score	A.6.3.6	
Subtractive variable 3: 'embellishment' score	A.6.3.7	

Textual dimension investigated	CS	MR
Realism score: master variable	A.7.1	A.7.2
Realism score: component variables		
Additive variable 1: 'familiarity' score	A.7.3.1	
Additive variable 2: 'spatial terms' score	A.7.3.2	
Additive variable 3: 'temporal terms' score	A.7.3.3	
Additive variable 4: 'present concern' score	A.7.3.4	
Additive variable 5: 'human interest' score	A.7.3.5	
Additive variable 6: 'concretedness' score	A.7.3.6	
Subtractive variable 1: 'past concern' score	A.7.3.7	
Subtractive variable 2: 'complexity' score	A.7.3.8	
Commonality score: master variable	A.8.1	A.8.2
Commonality score: component variables		
Additive variable 1: 'centrality' score	A.8.3.1	
Additive variable 2: 'co-operation' score	A.8.3.2	
Additive variable 3: 'rapport' score	A.8.3.3	
Subtractive variable 1: 'diversity' score	A.8.3.4	
Subtractive variable 2: 'exclusion' score	A.8.3.5	
Subtractive variable 3: 'liberation' score	A.8.3.6	

Table 7.8
Summary identification table for research questions / hypotheses ['Set B']

Textual dimension investigated	'good performers'	'poor performers'	Total sample
Readability:			
Flesch readability scores	B.1.1	B.2.1	B.3.1
Transitivity:			
Transitivity score: manual analysis	B.1.2	B.2.2	B.3.2
Transitivity score: computerised analysis	B.1.3	B.2.3	B.3.3
***DICTION* scores:**			
Certainty score: master variable	B.1.4	B.2.4	B.3.4
Optimism score: master variable	B.1.5	B.2.5	B.3.5
Activity score: master variable	B.1.6	B.2.6	B.3.6
Realism score: master variable	B.1.7	B.2.7	B.3.7
Commonality score: master variable	B.1.8	B.2.8	B.3.8

7.6 Statistical methods

Given the small sample sizes, a Mann-Whitney test, the non-parametric equivalent of the t-test, is used to search for systematic differences in the narratives of 'good performers' and 'poor performers'. As already indicated (Table 7.4 and sections 7.4.4.1 and 7.4.4.2), the sets of 'good performers' and 'poor performers' are not identical. The

Mann-Whitney test allows comparison between unmatched or independent samples. Mann-Whitney performs a two-sample rank test for the difference between two population medians, and calculates the corresponding point estimate and confidence interval. The two-tailed parameter is specified. Significance levels are reported at the one percent, five percent and ten percent levels. With the supplementary research questions 'Set B.3', in addition to the non-parametric Mann-Whitney test, a paired t-test was also used. The use of a parametric t-test depends on the data being normally distributed, which cannot be assumed, particularly given that the total sample is only twenty-five. The normality of the distribution was therefore checked. Since the parametric test requires paired samples, trust 'Y' is excluded (hence a sample of twenty-five) because the annual report did not include a Manager's report (for 'Set B.3', trust 'Y' is also excluded from the non-parametric test, such that the parametric and the non-parametric tests are used on a like for like basis).

7.7 Results of empirical analysis ['Set A']

The results are reported as follows. Sections 7.7.1 to 7.7.8 discuss results relating to hypotheses 'Set A' (detailed in Table 7.7). These hypotheses are derived from the research questions 'Set A' (section 7.5.1).

The tables in sections 7.7.1 to 7.7.8, report results for 'Set A'. In addition, the tables report results relating to 'Sets B.1 and B.2'. These results are reported here since the data analysed is identical and it is not considered necessary to reproduce tables in section 7.8, which discusses the results for 'Set B'. Appropriate reference is made in tables 7.9 to 7.21, as appropriate, to the discussion of results in relation to 'Set B' in section 7.8. An overall synthesis of the results for 'Set A', along with those for 'Set B' is included in section 7.9.

Illustrative data relating to each of the methods are included in the Appendices. Appendix 7E reports Flesch readability scores for the Chairman's statement and the Manager's report. Scores are based on a standardised text (section 7.2.1). Appendix 7F reports overall texture and component indexical scores for the Chairman's statement. These scores equate to the percentage totals illustrated in Appendix 5C.3 (page 2/2). Scoring sheets identical to the example included as Appendix 5C.3 were prepared for each text analysed. Only the totals are included in Appendix 7F. As indicated in section 7.2, the application only exploits the vertical summation of indexical scores. Data relating to the transitivity index are included in Appendix 7G.1 (scores derived

from manual analysis) and 7G.2 (scores derived from computerised analysis). Transitivity scores are computed for both the Chairman's statement and the Manager's report. Appendices 7H-L report *DICTION* scores for 'certainty' (Appendix 7H), 'optimism' (Appendix 7I), 'activity' (Appendix 7J), 'realism' (Appendix 7K) and 'commonality' (Appendix 7L). As indicated in section 7.2, an adapted 'certainty' formula is used. For each Appendix reporting *DICTION* scores, two schedules are included. Taking the 'certainty' variable as illustration, Appendix 7H.1 reports master variable 'certainty' scores for both the Chairman's statement and the Manager's report. Appendix 7H.2 reports component variable scores for 'certainty' for the Chairman's statement. Apart from the 'certainty' master variable, where the formula has been adapted, scores are compared to normative values for 'corporate annual reports' (section 6.3.5 and Table 6.11). Given the relatively small data set from which these normative values are derived (see section 6.3.5), they are included here primarily for illustrative purposes. Comparison with actual scores will not be discussed in detail. The Appendices reporting *DICTION* scores were prepared from data produced in *DICTION* reports (Appendix 6B). The *DICTION* software, however, can only produce reports for single texts.

Finally, in discussing the results, it is important to bear in mind the caveats and limitations identified in section 7.1.

7.7.1 Flesch readability scores ['Set A.1']

Table 7.9 reports results for hypotheses 'Set A.1' for Flesch readability scores. Results for hypotheses 'Sets B.1 and B.2' are also reported in Table 7.9 (discussed in section 7.8).

Table 7.9
Flesch readability scores for Chairman's statement and Manager's report of 'good performers' and 'poor performers'

Reports results for hypotheses A.1.1-2 [Table 7.7]
Also reports results for hypotheses B.1.1 & B.2.1 [Table 7.8]

	Median scores	
	'good performers'	'poor performers'
Performance measure 1:		
Flesch readability score [CS]	32.90	32.85
Flesch readability score [MR]	34.15	35.80
Performance measure 2:		
Flesch readability score [CS]	36.70	31.60
Flesch readability score [MR]	38.50 [1]	35.00

Median scores computed from data in Appendix 7E

Results:

[1] Hypothesis A.1.2: significant difference at the 10% level ($p = 0.0932$)

These results can be considered as consistent with the *a priori* expectation, that the evidence for a relationship between readability and performance, is inconclusive (see sections 3.4.1 and 3.4.3). The higher readability score in the Manager's report of 'good performers', when compared to 'poor performers' (for performance measure 2) supports the obfuscation hypothesis, namely that management is not neutral in its presentation of narrative information and will seek to obfuscate failures or bad news disclosures (Courtis, 1998, p. 466). This is balanced by the findings for the Chairman's statement where no significant differences were found and for the Manager's report for performance measure 1.

In terms of the range of scores, all the median scores reported in Table 7.9 fall within the range 30-50, which is conventionally termed 'difficult' (section 7.2.1). These findings are consistent with prior readability studies of annual reports, which generally concur that the reports are difficult or very difficult to read (Jones and Shoemaker, 1994, p. 169). This is discussed further in section 7.8.

7.7.2 Indexical scores ['Set A.2']

Table 7.10 reports results for hypotheses 'Set A.2' for indexical scores.

Table 7.10
Indexical scores for Chairman's
Statement of 'good performers' and 'poor performers'

Reports results for hypotheses A.2.1-8 [Table 7.7]

	Median scores	
	'good performers'	'poor performers'
Performance measure 1:		
Overall 'texture' score	54.05	53.05
Indexical score for 'topicality'	89.75	89.15
Coverage of 'main topics'		
Main topic 'A'	28.85	25.40
Main topic 'B'	31.85	32.55
Main topic 'C'	12.15	8.05
Main topic 'D'	12.05	12.20
Main topic 'E'	9.20	9.40
Supporting statements	19.45	21.75
Indexical score for 'intertextuality'	40.50	44.05
Indexical score for 'conjunction'	47.40	43.15
Indexical score for 'connectivity'	43.90	41.20
Indexical score for 'specificity'	37.35	33.60
Indexical score for 'shift'	81.95	76.60
Performance measure 2:		
Overall 'texture' score	53.10	51.40
Indexical score for 'topicality'	92.60 [1]	86.35
Coverage of 'main topics'		
Main topic 'A'	24.40	25.20
Main topic 'B'	34.00	29.65
Main topic 'C'	12.10	10.95
Main topic 'D'	13.00	11.35
Main topic 'E'	8.90	8.30
Supporting statements	14.90 [2]	24.50
Indexical score for 'intertextuality'	41.30	39.05
Indexical score for 'conjunction'	44.70	43.00
Indexical score for 'connectivity'	41.50	37.80
Indexical score for 'specificity'	34.00	32.60
Indexical score for 'shift'	80.90 [3]	74.90

Median scores computed from data in 7F

Results:

[1] Hypothesis A.2.2: significant difference at the 10% level ($p = 0.0550$)
[2] Hypothesis A.2.3.6: significant difference at the 10% level ($p = 0.0942$)
[3] Hypothesis A.2.8: significant difference at the 10% level ($p = 0.0792$)

Taking the scores for the texture index overall, there is little evidence to suggest that the narratives of 'good performers' are of a different texture to those of 'poor performers'. In reflecting on the significance of these results, each indexical is considered in turn.

As noted in section 5.7, each indexical is considered in terms of its indicating a separate aspect of managerial intention in drafting the narrative. In terms of the overall 'texture' score, it was noted in section 5.7 that it is difficult to attach an interpretation to the arithmetic total summed across indexicals. The validity of such an interpretation would depend on incorporating the response of users with a view to weighting indexicals for cross-summation. This is a matter for further research (see section 8.3.2).

The 'topicality' score is a measure of the degree to which a narrative adheres to those topics which are deemed essential to its stated purpose. In developing rules for the indexical, this stated purpose was fashioned in accordance with a specification of perceived users' needs (section 5.4.1). Overall scores for 'topicality' and constituent scores for 'supporting statements' provide some evidence of differentiation between 'good performers' and 'poor performers'. Specifically, the Chairman's statement of 'good performers' is more topical, containing fewer 'supporting statements'. It might be inferred that a particular strategy or intention of management in reporting poor performance, is to include a greater amount of supporting information that detracts from the disclosure of main topics.

The 'intertextuality' score reflects the extent to which there is explicit or implicit reference in the narrative to other sections of the annual report, including the financial statements, or to other reports in the continuum of the reporting cycle, such as interim reports. As indicated in section 5.4.2, intertextuality is an essential feature of the Chairman's statement, ensuring its complementarity in relation to the format of the annual report as a whole. A low score for intertextuality, might be indicative of an intention on the part of management to set the Chairman's statement apart from the the rest of the annual report as a stand-alone narrative. Such a strategy might be particularly prevalent amongst 'poor performers', where the reader's attention is focused on the Chairman's statement, which creates a different impression from the financial statements or the annual report when taken as a whole. The results for the intertextuality score reported in Table 7.10 are not indicative of such a strategy. Rather, it appears that for both 'good performers' and 'poor performers', the intention is to present the Chairman's statement in a way that best complements the format of the annual report as a whole.

The indexical 'conjunction' is concerned with the explanatory and discursive dimensions of the narrative. In this regard, it was noted in section 5.4.3 that a

Chairman's statement scoring highly for conjunction, would be one rich in commentary, explanation and review, in relation to the particular topics included. A low score for conjunction might be indicative of a strategy to avoid explanations. Such a strategy might be associated with the reporting of poor performance. The presence or absence of explanations is not in itself, however, necessarily indicative of impression management. Moreover, the nature of the explanation is relevant, in terms of its attributional content and attributional framing (section 3.5). Bearing these caveats in mind, the fact that no significant differences were found in the conjunction scores for 'good performers' and 'poor performers', is evidence of a consistent reporting pattern that is not affected by financial performance. On the basis of this evidence, it can be concluded that managements do not pursue a self-serving strategy in terms of the relative extent of explanatory material provided.

The score for 'connectivity' is a measure of the internal connectedness of the narrative. It measures the degree of semantic linkage across t-units. Weak connectivity is associated with obfuscation (section 5.4.4). On this basis, a particular strategy of management in reporting poor performance might be obfuscation through weak connectivity. The empirical evidence in this study, however, suggests that such a strategy is not pursued.

The 'specificity' score is a measure of the extent to which a narrative includes specific reference material. In section 5.4.5, it was argued that the inclusion of specific (typically quantitative) information is an important constituent of a Chairman's statement that provides information useful to users. A low score for specificity might therefore be indicative of a strategy on the part of management to couch poor performance in general, vague terms, avoiding for example, the inclusion of the specific quantification of a loss in the Chairman's statement. Once again, however, the evidence presented in this study does not support such a strategy being pursued.

The score for 'shift' is a quantification of how many information categories are contained in the narrative and how frequently the category changes. While shift in information categories throughout the narrative is necessary to ensure adequate coverage and an orderly, logical flow, equally, shifting categories can also present a potential stumbling block for interpretation because of a potential loss of coherence (section 5.4.6). A high score for shift might be indicative of a strategy on the part of management to disrupt the coherence of the narrative, when reporting poor

performance. Equally however, a low score for 'shift' might be indicative of a strategy to avoid a full coverage of information categories or topics. As indicated in section 5.4.6 (also section 5.7), it is difficult at this stage to attach a precise interpretation to the 'shift' score. In particular, it would be fruitful to determine what is a desirable level of 'shift'. This is discussed as a matter for further research (section 8.3.2). The results for the 'shift' score presented in Table 7.10 indicate a significant difference between 'good performers' and 'poor performers' for performance measure 2). Bearing in mind the comments above, it may be that the higher score for 'shift' is associated with the higher score for 'topicality' (and the corresponding lower constituent score for 'supporting statements').

7.7.3 Transitivity scores ['Set A.3']

Table 7.11 reports results for hypotheses 'Set A.3' for transitivity scores. Results for hypotheses 'Sets B.1 and B.2' are also reported in Table 7.11 (discussed in section 7.8).

Table 7.11
Transitivity scores for Chairman's statement and
Manager's report of 'good performers' and 'poor performers'

Reports results for hypotheses A.3.1-4 [Table 7.7]
Also reports results for hypotheses B.1.2-3 & B.2.2-3 [Table 7.8]

	Median scores	
	'good performers'	'poor performers'
Manual analysis:		
Performance measure 1:		
Transitivity score [CS]	27.65 [1]	37.35
Transitivity score [MR]	23.25 [2]	33.3
Performance measure 2:		
Transitivity score [CS]	27.6 [1]	33.9
Transitivity score [MR]	22.4	28.6
Computerised analysis:		
Performance measure 1:		
Transitivity score [CS]	17.0 [1]	24.0
Transitivity score [MR]	14.5 [2]	25.0
Performance measure 2:		
Transitivity score [CS]	15.0 [1]	22.0
Transitivity score [MR]	13.0	19.0

Median scores computed from data in Appendices 7G.1 (manual analysis) and 7G.2 (computerised analysis).

Results

Manual analysis:

[1] Hypothesis A.3.1: significant difference at the 5% level ($p = 0.0263$ [Performance measure 1] and $p = 0.0454$ [Performance measure 2])
[2] Hypothesis A.3.2: significant difference at the 5% level ($p = 0.0168$)

Computerised analysis:

[1] Hypothesis A.3.3: significant difference at the 10% level ($p = 0.0607$ [Performance measure 1] and $p = 0.0604$ [Performance measure 2])
[2] Hypothesis A.3.4: significant difference at the 1% level ($p = 0.0063$).

The 'transitivity' score is a relative measure of the number of passive sentences in a text. The use of passive constructions gives the text a veneer of objectivity or neutrality and can be used as an impression management strategy to disassociate the writer from

the text in reporting poor performance (sections 6.2.1 and 6.2.3). Links were made with those studies investigating patterns of causal reasoning and attribution in accounting narratives (see section 6.2.1). The results in Table 7.11 show that significant differences between 'good performers' and 'poor performers' were found for both the Chairman's statement and the Manager's report. The lower transitivity scores for 'good performers' are consistent with *a priori* expectations that the narratives of 'poor performers' are characterised by a more objective, detached style, indicative of managements' desire to distance themselves from the message communicated. On the basis of these results, it appears that verbal voice is a particular linguistic dimension that is exploited by management as an impression management strategy in accounting narratives. In terms of tests of differences, the results of the computerised analysis are similar to the manual analysis, although the absolute values are different. One must be wary, however, of concluding that the computerised model is a reliable proxy for the manual approach. This was discussed in some detail in section 6.2.4, where the problems in terms of face validity with the computerised approach were highlighted.

7.7.4 *DICTION* scores for expression of 'certainty' ['Set A.4']

Table 7.12 reports results for hypotheses 'Set A.4' for master variable scores for 'certainty'. Results for hypotheses 'Sets B.1 and B.2' are also reported in Table 7.12 (discussed in section 7.8).

Table 7.12
***DICTION* MV score for 'certainty' in Chairman's statement and Manager's report of 'good performers' and 'poor performers'**

Reports results for hypotheses A.4.1-2 [Table 7.7]
Also reports results for hypotheses B.1.4 & B.2.4 [Table 7.8]

	Median scores	
	'good performers'	'poor performers'
Performance measure 1:		
MV score for 'certainty' [CS]	49.59 *[1]*	48.09
MV score for 'certainty' [MR]	46.84	47.09
Performance measure 2:		
MV score for 'certainty' [CS]	49.82 *[1]*	47.30
MV score for 'certainty' [MR]	47.42	47.09

Median scores computed from data in Appendix 7H.1 are based on aggregated z-scores. *DICTION* adds a constant of 50 to the aggregated z-scores to eliminate negative numbers.

Results:

[1] *Hypothesis B.1.4: significant difference at the 5% level (p = 0.0452 [Performance measure 1] and p = 0.0423 [Performance measure 2]) (see section 7.8 for discussion of results)*

No significant differences were found between 'good performers' and 'poor performers' for the master variable score for 'certainty'. While comparison with Ober *et al.* (1999) is problematic, since different 'certainty' formulae are used, the studies find similar results for the use of 'certainty'. Ober *et al.,* found no significant difference between 'good performers' and 'poor performers' for the use of 'certainty' in Management's discussion and analysis in US corporate reports (sections 3.6.2 and 6.3.4.1). Interpreting the results is more problematic. It may be that managements communicate good news and bad news with equal certainty. This is the interpretation offered by Ober *et al.*, that management will "tell it like it is, no matter whether profits have increased or decreased" (p. 292). Equally, however, it may be that a marked tone for certainty is in itself a self-serving strategy, adopted by 'poor performers' to imitate 'good performers'.

Table 7.13 reports results for hypotheses 'Set A.4' for component variable scores for 'certainty'.

Table 7.13
DICTION CV scores for 'certainty' in Chairman's statement of 'good performers' and 'poor performers'

Reports results for hypotheses A.4.3.1-6 [Table 7.7]

	Median scores	
	'good performers'	'poor performers'
Performance measure 1:		
Additive variable 1: 'tenacity' score	20.26	25.44
Additive variable 2: 'leveling' score	3.99	4.26
Additive variable 3: 'collectives' score	11.9	10.83
Additive variable 4: 'insistence' score *[CS]*	65.56	60.88
Subtractive variable 1: 'ambivalence' score	5.12	5.41
Subtractive variable 2: 'variety' score *[CS]*	0.51	0.57
Performance measure 2:		
Additive variable 1: 'tenacity' score	25.66	23.9
Additive variable 2: 'leveling' score	4	5.29
Additive variable 3: 'collectives' score	12.21	9.86
Additive variable 4: 'insistence' score *[CS]*	76.73	58.35
Subtractive variable 1: 'ambivalence' score	6.47	7.31
Subtractive variable 2: 'variety' score *[CS]*	0.47	0.57

Median scores computed from data in Appendix 7H.2 are 'frequency' scores apart from 'insistence' and 'variety', which are 'calculated' scores *[CS]*.

No significant differences were found for component variable scores. For an interpretation of these results, reference can be made to the discussion above for differentiation between 'good performers' and 'poor performers' for the master variable scores.

7.7.5 *DICTION* scores for expression of 'optimism' ['Set A.5']

Table 7.14 reports results for hypotheses 'Set A.5' for master variable scores for 'optimism'. Results for hypotheses 'Sets B.1 and B.2' are also reported in Table 7.14 (discussed in section 7.8).

Table 7.14
***DICTION* MV score for 'optimism' in Chairman's statement and Manager's report of 'good performers' and 'poor performers'**

Reports results for hypotheses A.5.1-2 [Table 7.7]
Also reports results for hypotheses B.1.5 & B.2.5 [Table 7.8]

	Median scores	
	'good performers'	'poor performers'
Performance measure 1:		
MV score for 'optimism' [CS]	54.08 [1]	50.54
MV score for 'optimism' [MR]	51.75	52.09
Performance measure 2:		
MV score for 'optimism' [CS]	53.09	51.45
MV score for 'optimism' [MR]	51.23	51.90

Median scores computed from data in Appendix 7I.1 are based on aggregated z-scores. *DICTION* adds a constant of 50 to the aggregated z-scores to eliminate negative numbers.

Results:

[1] Hypothesis A.5.1: significant difference at the 10% level ($p = 0.0832$)

In section 7.7.4, with reference to the 'certainty' variable, it was suggested that a particular impression management strategy adopted by 'poor performers' might be the imitation of the marked tone for 'certainty' that characterises the narratives of 'good performers'. Applying a similar principle to the expression of 'optimism', one might expect that 'poor performers' will mirror 'good performers' in their expression of 'optimism'. Results are mixed. The absence of differentiation for the Chairman's statement (performance measure 2) and for the Manager's report (both performance measures) suggest that such a strategy is being followed. These findings are qualified, however, by evidence of a more emphatic tone for 'optimism' in the Chairman's statement of 'good performers' (performance measure 1).

Table 7.15 reports results for hypotheses 'Set A.5' for component variable scores for 'optimism'.

Table 7.15
***DICTION* CV scores for 'optimism' in**
Chairman's statement of 'good performers' and 'poor performers'

Reports results for hypotheses A.5.3.1-6 [Table 7.7]

	Median scores	
	'good performers'	'poor performers'
Performance measure 1:		
Additive variable 1: 'praise' score	6.77	6.39
Additive variable 2: 'satisfaction' score	2.83 [1]	1.13
Additive variable 3: 'inspiration' score	6.08	5.76
Subtractive variable 1: 'blame' score	0.50 [2]	1.81
Subtractive variable 2: 'hardship' score	1.19	1.00
Subtractive variable 3: 'denial' score	2.06	1.05
Performance measure 2:		
Additive variable 1: 'praise' score	7.05	6.39
Additive variable 2: 'satisfaction' score	2.20	1.50
Additive variable 3: 'inspiration' score	4.62	4.57
Subtractive variable 1: 'blame' score	0.50	1.00
Subtractive variable 2: 'hardship' score	1.01	1.25
Subtractive variable 3: 'denial' score	2.40	2.16

Median scores computed from data in Appendix 7I.2 are 'frequency' scores.

Results:

[1] Hypothesis A.5.3.2: significant difference at the 1% level ($p = 0.0097$)
[2] Hypothesis A.5.3.4: significant different at the 5% level ($p = 0.0469$)

The scores reported in Table 7.15 for the component variables find some differences between 'good performers' and 'poor performers'. The low word counts for the component variables, however, indicate that no meaningful inference can be drawn from comparing the scores.

7.7.6 *DICTION* scores for expression of 'activity' ['Set A.6']

Table 7.16 reports results for hypotheses 'Set A.6' for master variable scores for 'activity'. Results for hypotheses 'Sets B.1 and B.2' are also reported in Table 7.16 (discussed in section 7.8).

Table 7.16
***DICTION* MV score for 'activity' in Chairman's statement and Manager's report of 'good performers' and 'poor performers'**

Reports results for hypotheses A.6.1-2 [Table 7.7]
Also reports results for hypotheses B.1.6 & B.2.6 [Table 7.8]

	Median scores	
	'good performers'	'poor performers'
Performance measure 1:		
MV score for 'activity' [CS]	48.35	49.16
MV score for 'activity' [MR]	48.32 [1]	50.74
Performance measure 2:		
MV score for 'activity' [CS]	47.71	48.33
MV score for 'activity' [MR]	48.21 [1]	49.10

Median scores computed from data in Appendix 7J.1 are based on aggregated z-scores. *DICTION* adds a constant of 50 to the aggregated z-scores to eliminate negative numbers.

Results:

[1] Hypothesis A.6.2: significant difference at the 10% level ($p = 0.0710$ [Performance measure 1] and $p = 0.0636$ [Performance measure 2])

A more emphatic tone for 'activity' was found in the Manager's report of 'poor performers' (both performance measures). No significant differences were found for the Chairman's statement. In considering the appropriateness of the *DICTION* 'activity' variable for accounting related applications, it was suggested in section 6.3.4.3 that a marked verbal tone for the semantic feature 'activity' is indicative of a company that is forward-looking, that is progressive and that is self-determining, controlling its own success. On this basis, it might be surmised that the creation of an emphatic tone for 'activity' would be an impression management strategy adopted by 'poor performers' in their narratives to mirror 'good performers'. The evidence in this study is supportive of such a view.

Table 7.17 reports results for hypotheses 'Set A.6' for component variable scores for 'activity'.

Table 7.17
***DICTION* CV scores for 'activity' in**
Chairman's statement of 'good performers' and 'poor performers'

Reports results for hypotheses A.6.3.1-7 [Table 7.7]

	Median scores	
	'good performers'	'poor performers'
Performance measure 1:		
Additive variable 1: 'aggression' score	1.63	2.58
Additive variable 2: 'accomplishment' score	19.81	20.83
Additive variable 3: 'communication' score	2.60	2.04
Additive variable 4: 'motion' score	2.88	1.00
Subtractive variable 1: 'cognitive terms' score	5.78	6.44
Subtractive variable 2: 'passivity' score	6.97	5.58
Subtractive variable 3: 'embellishment' score *[CS]*	0.71	0.74
Performance measure 2:		
Additive variable 1: 'aggression' score	1.88	2.29
Additive variable 2: 'accomplishment' score	20.81	19.3
Additive variable 3: 'communication' score	2.47	2.42
Additive variable 4: 'motion' score	2.50	1.00
Subtractive variable 1: 'cognitive terms' score	6.95	6.44
Subtractive variable 2: 'passivity' score	7.29	6.50
Subtractive variable 3: 'embellishment' score *[CS]*	0.80	0.74

Median scores computed from data in Appendix 7J.2 and 'frequency' scores apart from 'embellishment', which is a 'calculated' score *[CS]*.

No significant differences were found for the component variable scores. For an interpretation of these results, reference can be made to the discussion above for differentiation between 'good performers' and 'poor performers' for the master variable scores.

7.7.7 *DICTION* scores for expression of 'realism' ['Set A.7']

Table 7.18 reports results for hypotheses 'Set A.7' for master variable scores for 'realism'. Results for hypotheses 'Sets B.1 and B.2' are also reported in Table 7.18 (discussed in section 7.8).

Table 7.18
***DICTION* MV score for 'realism' in Chairman's statement and Manager's report of 'good performers' and 'poor performers'**

Reports results for hypotheses A.7.1-2 [Table 7.7]
Also reports results for hypotheses B.1.7 & B.2.7 [Table 7.8]

	Median scores	
	'good performers'	'poor performers'
Performance measure 1:		
MV score for 'realism' [CS]	46.38	46.42
MV score for 'realism' [MR]	46.03	47.66
Performance measure 2:		
MV score for 'realism' [CS]	46.59	46.24
MV score for 'realism' [MR]	46.69	47.77

Median scores computed from data in Appendix 7K.1 are based on aggregated z-scores. *DICTION* adds a constant of 50 to the aggregated z-scores to eliminate negative numbers.

The variable 'realism' is associated with obfuscation (section 6.3.4.4). On this basis, a particular strategy of management in reporting poor performance might be obfuscation through weakening the semantic content for 'realism'. The empirical evidence in this study, however, suggests that such a strategy is not pursued.

Table 7.19 reports results for hypotheses 'Set A.7' for component variable scores for 'realism'.

Table 7.19
***DICTION* CV scores for 'realism' in**
Chairman's statement of 'good performers' and 'poor performers'

Reports results for hypotheses A.7.3.1-8 [Tables 7.7]

	Median scores	
	'good performers'	'poor performers'
Performance measure 1:		
Additive variable 1: 'familiarity' score	140.31	138.94
Additive variable 2: 'spatial terms' score	4.54	4.45
Additive variable 3: 'temporal terms' score	16.44	19.33
Additive variable 4: 'present concern' score	4.26	9.75
Additive variable 5: 'human interest' score	11.21	4.84
Additive variable 6: 'concretedness' score	21.9	22.29
Subtractive variable 1: 'past concern' score	2.27	3.50
Subtractive variable 2: 'complexity' score *[CS]*	4.97	4.91
Performance measure 2:		
Additive variable 1: 'familiarity' score	136.72	138.25
Additive variable 2: 'spatial terms' score	3.93	3.88
Additive variable 3: 'temporal terms' score	17.5	19.88
Additive variable 4: 'present concern' score	5.26	6.67
Additive variable 5: 'human interest' score	10.74	4.84
Additive variable 6: 'concretedness' score	25.31	22.24
Subtractive variable 1: 'past concern' score	3.00	2.94
Subtractive variable 2: 'complexity' score *[CS]*	4.95	4.90

Median scores computed from data in Appendix 7K.2 are based on 'frequency' scores apart from 'complexity', which is a 'calculated' score *[CS]*.

No significant differences were found. For an interpretation of these results, reference can be made to the discussion above for differentiation between 'good performers' and 'poor performers' for the master variable scores.

7.7.8 *DICTION* scores for expression of 'commonality' ['Set A.8']

Table 7.20 reports results for hypotheses 'Set A.8' for master variable scores for 'commonality'. Results for hypotheses 'Sets B.1 and B.2' are also reported in Table 7.20 (discussed in section 7.8).

Table 7.20
***DICTION* MV score for 'commonality' in Chairman's statement and Manager's report of 'good performers' and 'poor performers'**

Reports results for hypotheses A.8.1-2 [Table 7.7]
Also reports results for hypotheses B.1.8 & B.2.8 [Table 7.8]

	Median scores	
	'good performers'	'poor performers'
Performance measure 1:		
MV score for 'commonality' [CS]	51.39 *[2]*	51.72
MV score for 'commonality' [MR]	46.85 [1]	49.84
Performance measure 2:		
MV score for 'commonality' [CS]	51.60 *[2]*	52.82 *[3]*
MV score for 'commonality' [MR]	47.46	49.76

Median scores computed from data in Appendix 7L.1 are based on aggregated z-scores. *DICTION* adds a constant of 50 to the aggregated z-scores to eliminate negative numbers.

Results:

[1] Hypothesis A.8.2: significant difference at the 5% level ($p = 0.0359$)
[2] Hypothesis B.1.8: significant difference at the 1% level ($p = 0.0017$ [Performance measure 1] and $p = 0.0036$ [Performance measure 2] (see section 7.8 for discussion of results))
[3] Hypothesis B.2.8: significant difference at the 5% level ($p = 0.0485$ (see section 7.8 for discussion of results))

As indicated in section 6.3.4.5, a degree of caution must be observed in interpreting 'commonality' scores in the context of impression management. With these caveats in mind, the results for 'commonality' scores do provide some interesting insights as to aspects of management intention in constructing accounting narratives. It was argued in section 6.3.4.5 that in the absence of impression management strategies, 'good performers' would exhibit a less marked tone for 'commonality' than 'poor performers', consistent with their desire to set themselves apart from the group, emphasising their diversity and exceptional performance. This inference is borne out to some extent by the lower 'commonality' score in the Manager's report of 'good performers' (performance measure 1). This evidence is countered by the absence of differentiation for the Chairman's statement (both performance measures) and for the Manager's report (performance measure 2). This may be evidence of an impression management strategy

on the part of 'poor performers', to emphasise group identity so as to avoid isolation as a 'poor performer'. Again, this is an aspect of the strategy associated with the variables 'certainty', 'optimism' and 'activity', whereby the narratives of 'poor performers' will mirror the semantic tone that characterises the narratives of 'good performers'.

Table 7.21 reports results for hypotheses 'Set A.8' for component variable scores for 'commonality'.

Table 7.21

***DICTION* CV scores for 'commonality' in Chairman's statement of 'good performers' and 'poor performers'**

Reports results for hypotheses A.8.3.1-6 [Table 7.7]

	Median scores	
	'good performers'	'poor performers'
Performance measure 1:		
Additive variable 1: 'centrality' score	4.11	6.25
Additive variable 2: 'co-operation' score	8.92	8.13
Additive variable 3: 'rapport' score	2.87	1.50
Subtractive variable 1: 'diversity' score	1.00	1.50
Subtractive variable 2: 'exclusion' score	2.52	6.14
Subtractive variable 3: 'liberation' score	0.52	0.50
Performance measure 2:		
Additive variable 1: 'centrality' score	5.13	4.93
Additive variable 2: 'co-operation' score	10.02	7.96
Additive variable 3: 'rapport' score	2.52	2.13
Subtractive variable 1: 'diversity' score	1.07	1.50
Subtractive variable 2: 'exclusion' score	2.02	3.05
Subtractive variable 3: 'liberation' score	0.50	0.50

Median scores computed from data in Appendix 7L.2 are 'frequency' scores.

No significant differences were found. For an interpretation of these results, reference can be made to the discussion above for differentiation between 'good performers' and 'poor performers' for the master variable scores.

7.8 Results of empirical analysis ['Set B']

This section reports and discusses results for hypotheses 'Set B' (detailed in Table 7.8). These hypotheses are derived from the research questions 'Set B' (section 7.5.2). The investigation of differentiation between different accounting narratives yields a number of insights that are not expressly concerned with the investigation of impression management. These might include *inter alia,* insights relating to narrative character,

narrative purpose and intended audience. The focus in this study, however, is to investigate differentiation between accounting narratives from an impression management perspective.

Three slants on differentiation between the Chairman's statement and the Manager's report were identified in section 7.5.2: differentiation in the narratives of 'good performers' [B.1], differentiation in the narratives of 'poor performers' [B.2] and differentiation between the Chairman's statement and the Manager's report for the total sample of companies investigated [B.3]. The final grouping [B.3] includes those companies not included in the sets of 'good performers' and 'poor performers' (see Table 7.4). The discussion of results here will follow this threefold structure. An overall summary is included in section 7.9 along with an overview of the results from 'Set A'.

As indicated in section 7.5.2, differentiation between the Chairman's statement and Manager's report is only investigated for Flesch readability scores, transitivity scores and *DICTION* master variables.

Finally, in discussing the results, it is important to bear in mind the caveats and limitations identified in section 7.1.

7.8.1 Differentiation in the narratives of 'good performers' ['Set B.1']

The results for hypotheses 'Set B.1' were reported in Tables 7.9, 7.11, 7.12, 7.14, 7.16, 7.18 and 7.20. The rationale for reporting the results in these tables was explained in section 7.7.

Significant differences were found for *DICTION* master variable scores for 'certainty' (both sets of 'good performers' (Table 7.12)) and 'commonality' (both sets of 'good performers') (Table 7.20)). Results for the 'certainty' score are interesting. Given that the Chairman's statement or its US equivalent the President's letter, is the most widely read section of the annual report (see, for example, Bartlett and Chandler, 1997; Courtis, 1998; Smith and Taffler, 2000), one might expect management to given special attention to this section, thereby making it a fertile narrative in which to investigate impression management (Courtis, 1998, p. 462). A more marked tone for 'certainty' in the Chairman's statement may be indicative of an intention on the part of management, in recognition of the accessibility of the Chairman's statement, to create a different impression from the rest of the financial statements. In this regard, however, it is

perhaps somewhat surprising that a similar differential reporting strategy is not observed for 'poor performers' (see section 7.8.2).

In both sets of 'good performers', the Chairman's statement exhibits a more emphatic tone for 'commonality' (see also section 7.8.2 below). For reasons highlighted in sections 6.3.4.5 and 7.7.8, interpreting these results in the context of impression management, is problematic. That said, the fact that the Chairman's statement and Manager's report exhibit differences in semantic character is interesting. A more marked tone for 'commonality' is indicative of a narrative tone that conveys consensus and group identity, rather than distinctiveness. This may indicate that the 'OFR-type' narrative is more likely to yield information that is idiosyncratic and vital in the context of decision-making.

No significant differences were found for Flesch readability scores (Table 7.9), transitivity scores (Table 7.11) and *DICTION* master variable scores for 'optimism' (Table 7.14), 'activity' (Table 7.16) and 'realism' (Table 7.18). The absence of differentiation for the *DICTION* variables is interesting. For example, the results for these variables do not indicate a strategy whereby management would seek to create a more optimistic, forward-looking or aggressive tone in the Chairman's statement.

7.8.2 Differentiation in the narratives of 'poor performers' ['Set B.2']

The results for hypotheses 'Set B.2' were reported in Tables 7.9, 7.11, 7.12, 7.14, 7.16, 7.18 and 7.20.

A significant difference was found for the *DICTION* master variable score for 'commonality' ('Set 2' of 'poor performers') (Table 7.20)). The more marked tone for 'commonality' in the Chairman's statement mirrors the findings for 'good performers' for this particular semantic variable (section 7.8.1). From the perspective of 'poor performers' and building on the discussion in section 7.8.1 above, it may be that managements of 'poor performers' use the Chairman's statement in particular to establish group identity, so as to avoid isolation as a 'poor performer'.

No significant differences were found for Flesch readability scores (Table 7.9), transitivity scores (Table 7.11) and *DICTION* master variable scores for 'certainty' (Table 7.12), 'optimism' (Table 7.14), 'activity' (Table 7.16) and 'realism' (Table 7.18). For 'good performers', significant differences were found for master variable scores for

'certainty' (section 7.8.1). The absence of differentiation for 'poor performers' is perhaps surprising.

7.8.3 Differentiation between the Chairman's statement and Manager's report [total sample] ['Set B.3']

Table 7.22 reports results for hypotheses 'Set B.3', tests of differences between the Chairman's statement and the Manager's report for the total sample. Both median and mean scores are reported. Tests of differences on medians used Mann-Whitney. Tests of differences on means used paired t-tests. With regard to the latter, the data was investigated and found to be normally distributed (see section 7.6).

Table 7.22
Differences between Chairman's statement and Manager's Report [total sample]

Reports results for research hypotheses B.3.1-8 [Table 7.8]

	Median scores		Mean scores	
	Chairman's Statement	Manager's Report	Chairman's Statement	Manager's Report
Readability				
Flesch readability score	35.10	36.10	35.32	35.04
Transitivity				
Transitivity score: manual	30.60	26.90	29.56	27.27
Transitivity score: computerised	19.00	17.00	19.36	16.24
***DICTION* scores**				
MV score for 'certainty'	48.30 [1]	47.09	48.30 [1]	46.44
MV score for 'optimism'	52.64	51.61	52.35	51.68
MV score for 'activity'	48.93	48.61	48.40	48.64
MV score for 'realism'	46.31	46.66	46.60	46.61
MV score for 'commonality'	51.31 [2]	47.84	51.70 [2]	47.96

Median and mean scores computed from data in Appendices 7E, 7G1 & 7G.2, 7H.1, 7I.1, 7J.1, 7K.1 & 7L.1 [in calculating median and mean scores, trust 'Y' is excluded (see section 7.6)]
DICTION scores are based on aggregated z-scores. *DICTION* adds a constant of 50 to the aggregated z-scores to eliminate negative numbers.

Results:

[1] Hypothesis B.3.4: significant difference at the 5% level ($p = 0.0238$ (median scores) and $p = 0.039$ (mean scores))
[2] Hypothesis B.3.8: significant difference at the 1% level ($p = 0.000$ (median and mean scores))

Broadly, the results here mirror those discussed in sections 7.8.1 and 7.8.2, with overall differences observed for *DICTION* master variable scores for 'certainty' and 'commonality'. Although the focus here is impression management, an interesting comparison can be made between the median readability scores for the Manager's

report and those reported in Sydserff and Weetman (1999) for the OFR. Comparison is appropriate since these narratives are of a similar generic character (section 4.8.1). The median score of 36.10 for the Manager's report (Table 7.22) compares to a median of 61.15 for the OFR (Sydserff and Weetman, 1999, p. 474). Both sets of scores are based on standardised texts. Both studies follow an identical procedure for standardising texts (section 7.2.1). Also, both studies use the same version of the Microsoft Word Flesch option for computing the scores. In terms of the range of scores, the data in Appendix 7E indicates that the scores fall within the range 'very difficult' ('0-30') or 'difficult' ('30-50'), with the majority in the latter category. By contrast, with the OFR, the majority of scores are in the range '50-60' ('fairly difficult') (Sydserff and Weetman, 1999, p. 474). These differences might be explained by the different character of the narratives, the Manager's report drawing on a particular lexicon that will give rise to relatively higher readability scores. It may be that preparers of the OFR are more conscious of the communicative context than the investment trust managers. A degree of caution, however, must be observed in making comparison with this earlier study, given the limited data sets used in both studies.

7.9 Overview and contextualization of results

The empirical application in this chapter has investigated differences in the narrative reporting practices of 'good performers' and 'poor performers', drawn from a particular sector of UK investment trust companies. In addition to the Chairman's statement, the 'OFR-type' Manager's report has also been investigated. Bearing in mind the limitations and caveats identified in section 7.1, the application yields some interesting insights in relation to impression management.

Overall, the results from tests of differentiation between 'good performers' and 'poor performers' are mixed. While providing some evidence in support of impression management, in particular with regard to the indexicals 'topicality' and 'shift' (section 7.7.2), 'transitivity' (section 7.7.3), expression of 'optimism' (section 7.7.5) and expression of 'activity' (section 7.7.6), the absence of differentiation across a number of dimensions investigated is suggestive of the view that management is even-handed in its presentation of narrative information. This was particularly evident with the textual dimensions embraced by the texture index (other than 'topicality' and 'shift'). While equating the absence of differentiation with the absence of strategic impression management is appropriate for a number of textual dimensions, in some instances the absence of differentiation may be indicative of impression management. This was

discussed in particular with regard to the expression of 'certainty' (section 7.7.4), 'optimism' (section 7.7.5) and 'activity' (section 7.7.6) (see also the discussion in section 3.7).

The results from tests of differentiation between the Chairman's statement and the Manager's report yield some interesting insights. While it is acknowledged that the different character of accounting narratives may be a factor of differentiation (section 7.8), a factor which must be borne in mind when making inferences regarding impression management, the presence of differentiation may point to the use of impression management strategies on the part of management. This is of particular relevance in relation to the investigation of semantic tone through *DICTION* variables. In other words, different tonal characters in different narratives compromise the consistency and balance of the corporate report as a whole. The results here provide only limited evidence for such inconsistency.

Contextualising these findings in terms of the impression management literature whose focus is accounting narratives, this study makes an important contribution in relation to what was identified as the dominant theme in the literature - differentiation between 'good performers' and 'poor performers' (section 3.7). In particular, the study has shown that the whole issue of differential reporting practices in the narrative disclosures of 'good performers' and 'poor performers' is complex. In particular, a general theme has emerged through this empirical application, namely that both the presence and absence of differentiation may be indicative of impression management, depending on the particular textual dimension that is being investigated. Further research will need to explore the issue of differential reporting patterns in detail to elicit whether impression management tactics are being employed (section 8.4).

Moreover, this study offers a number of specific insights in relation to specific gaps in the literature. These were identified in section 3.7 through a synthesis of the overall allocation of the literature in terms of the particular textual characteristic or dimension investigated, the accounting narratives investigated and the country or accounting jurisdiction investigated. Three gaps were identified: a lack of emphasis on the syntactic dimension, a lack of emphasis on narratives beyond the Chairman's statement, in particular, 'OFR-type' narratives, and a lack of emphasis on the UK context. Through the texture index and the transitivity index, the study has offered some empirical evidence in relation to the syntactic dimension. The investigation of the Manager's

report has offered some empirical evidence in relation to 'OFR-type' narratives beyond the Chairman's statement. Finally, the focus on UK investment trusts provides some evidence in a UK context.

7.10 Satisfaction of assessment criteria: outstanding issues

The critique of the texture index, in the context of the framework of recognised methodological assessment criteria in section 5.9, highlighted a particular issue that would be addressed further through the empirical application. The issue concerns the linking of texture and the constructs captured by the component indexicals, with impression management. This was identified as a factor both for face validity and for hypothesis validity (a component of external validity). While the analysis and discussion in section 7.7.2, goes some way towards establishing this link, as indicated in section 5.9, a more extensive body of empirical evidence will be necessary in order to make any definitive claims in this regard (section 8.3.2).

The critique of the transitivity index (section 6.2.4) and *DICTION* analysis (section 6.3.8), also highlighted hypothesis validity as an issue to be considered in relation to the empirical application in this chapter. Sections 7.7.3 (transitivity index) and 7.7.4 to 7.7.8 (*DICTION* analysis) provide sufficient evidence to satisfy hypothesis validity.

7.11 Summary and conclusions

The primary purpose of this chapter was to demonstrate the aptitude of the texture index, the transitivity index and *DICTION* analysis for investigating impression management. This requirement is reflected in the primary research question 1.6 (Table 4.1). The illustrative application focused on a particular research design and related research questions, characteristic of the impression management literature. The application has illustrated across the range of what is available and has demonstrated for each of the methods their aptitude for investigating impression management.

In addition to the methodological contribution, the application stands alone as an empirical study, contributing a number of insights to the existing impression management literature reviewed in chapter 3. The empirical contribution relates to the secondary research questions 2.1 and 2.2 (Table 4.1).

Appendix 7A

Summary of data collected

Trust Id.	Year-end	CS	MR
A	28th Feb 2000	✓	✓
B	31st Dec 1999	✓	✓
C	30th Jun 1999	✓	✓
D	31st Jan 2000	✓	✓
E	31st Dec 1999	✓	✓
F	30th Apr 1999	✓	✓
G	31st Jan 2000	✓	✓
H	31st Oct 1999	✓	✓
I	30th Jun 1999	✓	✓
J	30th Jun 1999	✓	✓
K	31st Jan 2000	✓	✓
L	31st Jul 1999	✓	✓
M	30th Jun 1999	✓	✓
N	30th Jun 1999	✓	✓
O	31st Aug 1999	✓	✓
P	31st Oct 1999	✓	✓
Q	5th Apr 1999	✓	✓
R	31st Mar 2000	✓	✓
S	31st Mar 2000	✓	✓
T	30th Sep 1999	✓	✓
U	30th Jun 1999	✓	✓
V	31st Jan 2000	✓	✓
W	31st Dec 1999	✓	✓
X	31st Dec 1999	✓	✓
Y	31st Mar 2000	✓	
Z	30th Nov 1999	✓	✓

Key:

CS Chairman's statement
MR Manager's report

Note:

Also included as Appendix 4A

Appendix 7B
Schedule of monthly performance statistics
[illustrative example]

Data at 31st January 2000

Basis of sample	NAV total return on £100 1 Yr Rank	NAVtr	Co. Id.	NAV total return on £100 3 Yr Rank	NAVtr	Co. Id.	NAV total return on £100 5 Yr Rank	NAVtr	Co. Id.
A	*1*	410.3	D	*1*	356.8	D	*1*	372.4	Q
B	*2*	331.7	T	*2*	266.4	T	*2*	371.6	G
C	*3*	255	G	*3*	256.1	I	*3*	369	T
D	*4*	241.9	J	*4*	232.4	G	*4*	364.6	I
E	*5*	239.9	P	*5*	228.9	J	*5*	345.2	R
F	*6*	239.4	Q	*6*	218.7	X	*6*	321.4	J
G	*7*	226.4	I	*7*	208.5	F	*7*	302	O
H	*8*	213	F	*8*	206.3	L	*8*	299.6	X
I	*9*	202.5	N	*9*	197	P	*9*	298.8	U
J	*10*	196.3	O	*10*	189.3	Q	*10*	296.1	L
K	*11*	196	L	*11*	186.6	O	*11*	285.7	V
L	*12*	194.1	R	*12*	185.4	N	*12*	279.8	M
M	*13*	192.7	X	*13*	183.6	R	*13*	255.4	A
N	*14*	191.7	U	*14*	181.6	M	*14*	253	K
O	*15*	184.2	M	*15*	177.9	V	*15*	243.1	N
P	*16*	178	H	*16*	173.8	U	*16*	242	H
Q	*17*	170.9	E	*17*	172.5	A	*17*	229.7	E
R	*18*	170.8	K	*18*	170.8	K	*18*	218.2	B
S	*19*	170.7	V	*19*	169.9	S	*19*	215.7	Y
T	*20*	166.7	A	*20*	168.7	H	*20*	202.2	W
U	*21*	166	S	*21*	157.9	E	*21*	201.8	C
V	*22*	154.7	Y	*22*	151.3	Y	*22*	181.4	Z
W	*23*	147.6	Z	*23*	137.7	W	*23*	Note 1	D
X	*24*	137.5	B	*24*	136	Z	*24*	Note 1	F
Y	*25*	135.9	W	*25*	134.2	B	*25*	Note 1	P
Z	*26*	132.5	C	*26*	129.9	C	*26*	Note 1	S

Notes

1. See section 7.4.3.2

Appendix 7C
Construction of performance 'Rank 1'

	Expressed in Id. Order [Col. 1]		*Expressed in rank order [Col. 2]*		*Expressed in Id. Order [Col. 3]*	
Ref to App. 7B	**Co.Id.**	**Rank**	**Co.Id.**	**Rank**	**Co.Id.**	**Rank**
	A	19	D	1	A	19
	B	24	I	1	B	24
	C	4	G	3	C	4
7B	D	1	C	4	D	1
	E	16	L	4	E	16
	F	12	T	6	F	12
7B	G	3	N	7	G	3
	H	11	P	9	H	11
	I	1	X	10	I	1
	J	24	H	11	J	24
7B	K	18	F	12	K	18
	L	4	R	13	L	4
	M	20	E	16	M	20
	N	7	S	16	N	7
	O	19	K	18	O	19
	P	9	A	19	P	9
	Q	26	O	19	Q	26
	R	13	V	19	R	13
	S	16	M	20	S	16
	T	6	Y	22	T	6
	U	26	B	24	U	26
7B	V	19	J	24	V	19
	W	26	Z	24	W	26
	X	10	Q	26	X	10
	Y	22	U	26	Y	22
	Z	24	W	26	Z	24
				Table 7.4		***Table 7.2***

Notes

Col. 1 Performance of trust relative to sector for its reporting period (expressed in order of Trust Id.)

Col. 2 Data from Col. 1 expressed in rank order

Col. 3 Data from Col. 2 expressed in order of Trust Id

Appendix 7D
Construction of performance 'Rank 2'

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		NAV I Yr. [Col. 1]		*NAV 3 Yr. [Col. 2]*		*NAV 5 Yr. [Col. 3]*		*NAVAve. [Col. 4]*	*Expressed in rank order [Col. 5]*	
Ref to App. 7B	**Co.Id.**	**Rank**	**Co.Id.**	**Rank**	**Co.Id.**	**Rank**	**Co.Id.**		**Co.Id.**	**Rank**
	A	19	A	15	A	14	A	16	D	1.00
	B	24	B	24	B	18	B	22.00	I	1.67
	C	4	C	11	C	8	C	7.67	G	3.00
7B	D	1	D	1	D	1	D	1.00	L	4.00
	E	16	E	21	E	17	E	18.00	C	7.67
	F	12	F	10	F	10	F	10.67	X	8.00
7B	G	3	G	4	G	2	G	3.00	R	9.33
	H	11	H	17	H	16	H	14.67	F	10.67
	I	1	I	1	I	3	I	1.67	N	11.67
	J	24	J	17	J	19	J	20.00	M	12.33
7B	K	18	K	18	K	14	K	16.67	P	12.33
	L	4	L	2	L	6	L	4.00	H	14.67
	M	20	M	10	M	7	M	12.33	O	15.00
	N	7	N	13	N	15	N	11.67	V	15.00
	O	19	O	15	O	11	O	15.00	A	16
	P	9	P	14	P	14	P	12.33	K	16.67
	Q	26	Q	24	Q	3	Q	17.67	T	17.00
	R	13	R	11	R	4	R	9.33	S	17.33
	S	16	S	18	S	18	S	17.33	Q	17.67
	T	6	T	25	T	20	T	17.00	E	18.00
	U	26	U	25	U	12	U	21.00	J	20.00
7B	V	19	V	15	V	11	V	15.00	Y	20.67
	W	26	W	22	W	21	W	23.00	U	21.00
	X	10	X	6	X	8	X	8.00	B	22.00
	Y	22	Y	22	Y	18	Y	20.67	W	23.00
	Z	24	Z	25	Z	21	Z	23.33	Z	23.33

Notes:

Col. 1 Performance of trust (for 1 Yr. NAV total return) relative to sector for its reporting period (expressed in order of Trust Id.)

Col. 2 Performance of trust (for 3 Yr. NAV total return) relative to sector for its reporting period (expressed in order of Trust Id.)

Col. 3 Performance of trust (for 5 Yr. NAV total return) relative to sector for its reporting period (expressed in order of Trust Id.)

Col. 4 Non-weighted average of performance of trust (for 1 Yr./3 Yr./5 Yr. NAV total return) relative to sector for its reporting period. Calculated as non-weighted average of Cols. 1., 2. & 3

Col. 5 Data from Col. 4 expressed in rank order

Appendix 7D
Construction of performance 'Rank 2'

Adjusted for expression [Col. 6]

Co.Id.	Rank
D	1
I	2
G	3
L	4
C	5
X	6
R	7
F	8
N	9
M	10
P	10
H	12
O	13
V	13
A	15
K	16
T	17
S	18
Q	19
E	20
J	21
Y	22
U	23
B	24
W	25
Z	26

Table 7.4

Expressed in Id. Order [Col. 7]

Co.Id.	Rank
A	15
B	24
C	5
D	1
E	20
F	8
G	3
H	12
I	2
J	21
K	16
L	4
M	10
N	9
O	13
P	10
Q	19
R	7
S	18
T	17
U	23
V	13
W	25
X	6
Y	22
Z	26

Table 7.2

Notes:

Col. 6 Adjusted for expression (based on data in Col. 5)

Col. 7 Data from Col. 6 expressed in order of Trust Id.

Appendix 7E
Flesh readability scores [CS and MR]
[standardised text]

Trust Id.	CS Flesch score [standardised text]	MR Flesch score [standardised text]
A	41.9	37.9
B	31.4	27.2
C	39	26.1
D	47.1	44
E	27.1	18.1
F	37.8	37.3
G	31.3	38.5
H	39.1	28.7
I	37.5	44.7
J	37.1	35
K	29.6	43.9
L	28.9	30.8
M	33.9	36.3
N	34.5	35.2
O	35.1	39.2
P	25.2	30.2
Q	41.9	35.8
R	36.7	39.8
S	38.8	38.1
T	29.4	33.1
U	45.7	38.2
V	40.3	26.3
W	30.6	36.1
X	31.2	44
Y	26.7	[Note 1]
Z	31.8	31.5

Notes

1. The annual report for this trust did not include a Manager's report.

Appendix 7F
Indexical scores [CS]
[actual text]

App. 5C.3

Trust Id.	Main topics: A	B	C	D	E	Supporting statements	Topicality	Intertextuality	Conjunction	Connectivity
A	24.3	24.3	13.5	13.5	16.2	27.0	86.5	32.4	32.4	41.9
B	39.6	25.0	8.3	16.7	4.2	20.8	89.6	55.2	35.4	49.0
C	24.4	7.3	12.2	26.8	4.9	41.5	81.7	46.3	42.7	65.9
D	42.6	12.8	21.3	36.2	19.1	14.9	92.6	29.8	48.9	55.3
E	33.3	22.2	22.2	7.4	7.4	29.6	85.2	38.9	38.9	31.5
F	13.0	52.2	21.7	13.0	17.4	4.3	97.8	41.3	30.4	26.1
G	26.7	48.9	11.1	8.9	8.9	8.9	95.6	43.3	53.3	36.7
H	31.0	28.6	9.5	2.4	9.5	26.2	86.9	38.1	48.8	23.8
I	20.7	17.2	10.3	24.1	10.3	27.6	86.2	39.7	39.7	32.8
J	25.8	40.3	8.1	4.8	9.7	21.0	89.5	33.1	47.6	46.0
K	24.1	51.7	3.4	6.9	10.3	13.8	93.1	37.9	44.8	41.4
L	8.5	34.0	8.5	10.6	6.4	42.6	78.7	36.2	44.7	41.5
M	32.0	36.0	8.0	20.0	12.0	8.0	96.0	46.0	36.0	38.0
N	36.4	42.4	12.1	12.1	3.0	0.0	100.0	53.0	45.5	54.5
O	23.3	20.9	11.6	11.6	11.6	30.2	84.9	43.0	32.6	38.4
P	37.0	33.3	22.2	7.4	7.4	3.7	98.1	48.1	59.3	46.3
Q	44.4	33.3	7.4	7.4	11.1	18.5	90.7	46.3	46.3	37.0
R	11.5	53.8	11.5	11.5	7.7	15.4	92.3	42.3	30.8	38.5
S	25.4	25.4	13.6	11.9	1.7	40.7	79.7	38.1	28.0	34.7
T	4.0	52.0	16.0	12.0	12.0	24.0	82.0	32.0	46.0	32.0
U	3.7	44.4	7.4	18.5	3.7	37.0	81.5	42.6	27.8	35.2
V	12.0	44.0	32.0	8.0	4.0	16.0	92.0	46.0	42.0	42.0
W	25.0	27.5	32.5	10.0	7.5	22.5	88.8	32.5	40.0	43.8
X	34.8	30.4	34.8	30.4	17.4	4.3	97.8	41.3	60.9	52.2
Y	13.5	13.5	24.3	10.8	13.5	45.9	75.7	39.2	48.6	44.6
Z	25.0	31.8	6.8	13.6	9.1	25.0	87.5	45.5	55.7	38.6

Appendix 7F
Indexical scores [CS]
[actual text]

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App. 5C.3

Trust Id.	Specificity	Shift	Overall texture
A	25.7	83.8	47.4
B	28.1	72.9	53.4
C	24.4	82.9	55.0
D	45.7	85.1	57.3
E	40.7	70.4	49.2
F	32.6	78.3	48.6
G	21.1	84.4	53.1
H	27.4	81.0	48.3
I	46.6	72.4	51.1
J	41.9	83.9	54.5
K	37.9	75.9	53.3
L	34.0	80.9	50.1
M	32.0	84.0	52.7
N	53.0	90.9	63.9
O	32.6	79.1	49.3
P	40.7	85.2	60.9
Q	24.1	74.1	51.2
R	26.9	73.1	48.6
S	28.0	79.7	45.1
T	30.0	72.0	46.9
U	20.4	63.0	43.4
V	46.0	68.0	54.9
W	40.0	77.5	51.6
X	45.7	78.3	61.3
Y	48.6	75.7	53.6
Z	35.2	84.1	55.4

Appendix 7G.1
Transitivity scores [manual analysis] [CS and MR]
[actual text]

Trust Id.	CS Transitivity score [actual text]	MR Transitivity score [actual text]
A	29.7	29.1
B	35.4	46.5
C	36.6	26.9
D	20.9	28.7
E	25.9	20.8
F	21.7	31
G	31.1	12.3
H	23.8	32.6
I	27.6	17.4
J	30.6	23.6
K	31	39.2
L	27.7	22.4
M	24	27.9
N	12.1	24.1
O	9.3	22
P	40.7	28.3
Q	39.3	28.6
R	46.1	18.1
S	32.2	16.4
T	28	18.9
U	40.7	43.2
V	32	24
W	47.5	33.3
X	4.3	21.2
Y	32.4	[Note 1]
Z	40.9	45.2

Notes

1. The annual report for this trust did not include a Manager's report.

Appendix 7G.2
Transitivity scores [computerised analysis] [CS and MR]
[actual text]

Trust Id.	CS Transitivity score [actual text]	MR Transitivity score [actual text]
A	25	22
B	15	25
C	20	19
D	10	17
E	20	16
F	15	18
G	20	12
H	17	22
I	17	9
J	14	15
K	16	21
L	13	16
M	20	28
N	6	13
O	11	2
P	36	17
Q	28	33
R	33	6
S	18	7
T	19	7
U	24	26
V	27	4
W	24	24
X	0	8
Y	24	[Note 1]
Z	36	19

Notes

1. The annual report for this trust did not include a Manager's report.

Appendix 7H.1
DICTION scores for MV 'certainty' [CS and MR] [actual text]

Trust Id.	CS *DICTION* score MV 'certainty' [actual text]	MR *DICTION* score MV 'certainty' [actual text]
A	53.63	47.73
B	47.88	47.09
C	52.94	42.24
D	51.41	48.68
E	46.94	45.41
F	52.33	48.68
G	49.35	44.38
H	50.49	47.66
I	45.16	49.14
J	51.88	44.59
K	48.1	40.43
L	46.35	44.03
M	48.37	46.93
N	52.87	47.86
O	49.51	47.37
P	44.74	44.2
Q	48.3	47.78
R	45.72	47.42
S	47.66	46.74
T	45.53	48.87
U	42.95	50.09
V	48.3	44.14
W	40.61	48.03
X	49.82	46.02
Y	53.33	[Note 1]
Z	46.77	45.51

Notes

1. The annual report for this trust did not include a Manager's report.
2. Comparison with normative values is not appropriate since the 'certainty' formula has been adjusted.

Appendix 7H.2
DICTION scores for MV 'certainty' and component variables [CS]
[actual text]

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Trust Id.	[1] MV 'certainty'		[2] CV_{add} 'tenacity'				[3] CV_{add} 'leveling'				[4] CV_{add} 'collectives'				[5] CV_{add} 'insistence' *[Note 1*		
	Revised score																
	z-score	*constant*	*FS*	*%*	*z-score*		*FS*	*%*	*z-score*		*FS*	*%*	*z-score*		*CS*	*z-score*	
A	3.63	53.63	24.6	4.92%	-0.84	*	5	1.00%	-1.01		13.51	2.70%	0.82		125.8	1.29	
B	-2.12	47.88	29.76	5.95%	-0.22	*	11.8	2.36%	0.75	*	6.51	1.30%	-0.53		58.59	-0.03	*
C	2.94	52.94	32.57	6.51%	0.13	*	10.15	2.03%	0.33	*	11.583	2.32%	0.46		86.58	0.52	*
D	1.41	51.41	34.18	6.84%	0.32	*	3.98	0.80%	-1.27		13.21	2.64%	0.76		62.72	0.05	*
E	-3.06	46.94	18.59	3.72%	-1.57		5.57	1.11%	-0.86		11.44	2.29%	0.42		57.09	-0.06	*
F	2.33	52.33	27.34	5.47%	-0.51	*	6	1.20%	-0.75	*	12.88	2.58%	0.7		93.53	0.65	*
G	-0.65	49.35	25.66	5.13%	-0.72	*	6.23	1.25%	-0.69		12.58	2.52%	0.64		68.39	0.16	*
H	0.49	50.49	20.04	4.01%	-1.4	*	2	0.40%	-1.78		14.81	2.96%	1.07	*	109.75	0.97	*
I	-4.84	45.16	19.66	3.93%	-1.45	*	4	0.80%	-1.26		15.63	3.13%	1.22	*	36.59	-0.46	*
J	1.88	51.88	25.85	5.17%	-0.69	*	5.65	1.13%	-0.84		10	2.00%	0.14		147.47	1.71	
K	-1.9	48.1	24.34	4.87%	-0.88	*	2	0.40%	-1.78		11.96	2.39%	0.52		68.52	0.16	*
L	-3.65	46.35	19.31	3.86%	-1.49	*	2.57	0.51%	-1.63		9.08	1.82%	-0.03		76.73	0.33	*
M	-1.63	48.37	34.78	6.96%	0.39	*	4.02	0.80%	-1.26		11.66	2.33%	0.46		41.17	-0.37	*
N	2.87	52.87	28.73	5.75%	-0.34	*	2.13	0.43%	-1.75		12.21	2.44%	0.57		187.17	2.49	
O	-0.49	49.51	11	2.20%	-2.5		3	0.60%	-1.52		15.77	3.15%	1.25	*	112	1.02	
P	-5.26	44.74	18.61	3.72%	-1.57		0	0.00%	-2.3	*	6.91	1.38%	-0.45		49.05	-0.22	*
Q	-1.7	48.3	25.03	5.01%	-0.79	*	4.5	0.90%	-1.14		12.1	2.42%	0.55		63.17	0.06	*
R	-4.28	45.72	22.44	4.49%	-1.11	*	2	0.40%	-1.78		10.07	2.01%	0.16		81.55	0.42	*
S	-2.34	47.66	31.33	6.27%	-0.03	*	5.96	1.19%	-0.76		9.71	1.94%	0.09		58.11	-0.04	
T	-4.47	45.53	20.48	4.10%	-1.35	*	6.31	1.26%	-0.67		8.9	1.08%	-0.07		47.81	-0.24	*
U	-7.05	42.95	32.11	6.42%	0.07	*	1	0.20%	-2.04		7.5	1.50%	-0.34		30	-0.59	*
V	-1.7	48.3	21.05	4.21%	-1.28	*	6.43	1.29%	-0.63		17	3.40%	1.49	*	34.89	-0.5	*
W	-9.39	40.61	14.78	2.96%	-2.04		3	0.60%	-1.52		5.48	1.10%	-0.72		74.85	0.29	*
X	-0.18	49.82	19.58	3.92%	-1.46	*	4.06	0.81%	-1.25		7.86	1.57%	-0.27		28.4	-0.62	*
Y	3.33	53.33	14.55	2.91%	-2.07		5	1.00%	-1.01		16.63	3.33%	1.42	*	122.25	1.22	
Z	-3.23	46.77	22.76	4.55%	-1.07	*	2.25	0.45%	-1.72		16.91	3.38%	1.47	*	58.01	-0.04	*

Key

* Outwith 'normal range'

FS Frequency score

CS Calculated score

Notes

1. In calculating the 'insistence' score, no researcher input was required (see description of 'insistence' score in Table 6.3).

Appendix 7H.2
DICTION scores for MV 'certainty' and component variables [CS]
[actual text]

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Trust Id.	[6] CV_{sub} 'ambivalence'				[7] CV_{sub} 'variety'		
	FS	*%*	*z-score*		*CS*	*z-score*	
A	3.5	0.70%	-1.47		0.41	-1.9	
B	12.29	2.46%	-0.09	*	0.58	2.18	*
C	6.47	1.29%	-1	*	0.47	-0.5	
D	6.53	1.31%	-0.99	*	0.47	-0.56	
E	7.79	1.56%	-0.8	*	0.56	1.79	*
F	5.58	1.12%	-1.14		0.45	-1.1	
G	4.6	0.92%	-1.3		0.54	1.34	*
H	4.93	0.99%	-1.24		0.47	-0.39	
I	11.18	2.24%	-0.26	*	0.62	3.15	*
J	3.96	0.79%	-1.4		0.48	-0.16	
K	6.43	1.29%	-1.01	*	0.53	0.93	*
L	6.59	1.32%	-0.99	*	0.56	1.82	*
M	1.5	0.30%	-1.78		0.6	2.63	*
N	4.33	0.87%	-1.34		0.47	-0.56	
O	8	1.60%	-0.76	*	0.47	-0.5	
P	3.3	0.66%	-1.5		0.58	2.22	*
Q	6.82	1.36%	-0.95	*	0.54	1.33	*
R	9.8	1.96%	-0.48	*	0.59	2.45	*
S	8.29	1.66%	-0.72	*	0.58	2.32	*
T	5.31	1.06%	-1.19		0.62	3.33	*
U	3.65	0.73%	-1.45		0.71	5.6	*
V	4.32	0.86%	-1.34		0.57	2.12	*
W	18.39	3.68%	0.87	*	0.67	4.53	*
X	3.55	0.71%	-1.46		0.41	-1.96	
Y	4	0.80%	-1.39		0.4	-2.38	
Z	13.62	2.72%	0.12	*	0.56	1.75	*

Key

* Outwith 'normal range'

FS Frequency score

CS Calculated score

Appendix 7I.1
DICTION scores for MV 'optimism' [CS and MR]
[actual text]

Trust Id.		CS *DICTION* score MV 'optimism' [actual text]		MR *DICTION* score MV 'optimism' [actual text]	
	A	52.99		51.25	
	B	49.24		52.09	
	C	51.04		51.23	
App. 6B	**D**	53.98	*	50.01	
	E	54.18	*	53.22	*
	F	51.09		50.16	
	G	49.63		52.17	
	H	55.25	*	53.78	*
	I	59.22	*	53.51	*
	J	52.64	*	49.87	
	K	51.84		50.29	
	L	53.09	*	52.23	
	M	54.37	*	55.55	*
	N	54.3	*	50.13	
	O	49.49		51.33	
	P	54.57	*	51.9	
	Q	50.45		49.06	
	R	53.73	*	52.34	
	S	53.76	*	51.9	
	T	54.18	*	51.61	
	U	50.63		50.44	
	V	50.44		51	
	W	47.27	*	53.72	*
	X	49.15		50.98	
	Y	50.46		[Note 1]	
	Z	52.27		52.11	

Key
* Outwith 'normal range'

Notes
1. The annual report for this trust did not include a Manager's report.

Appendix 7I.2
DICTION scores for MV 'optimism' and component variables [CS]
[actual text]

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Trust Id.	[1] MV 'optimism'		[2] CV_{add} 'praise'				[3] CV_{add} 'satisfaction'				[4] CV_{add} 'inspiration'				[5] CV_{sub} 'blame'			
			FS	*%*	*z-score*		*FS*	*%*	*z-score*		*FS*	*%*	*z-score*		*FS*	*%*	*z-score*	
A	52.99		5	1.00%	-0.35		2	0.40%	-0.46	*	8	1.60%	0.35	*	0	0.00%	-1.03	
B	49.24		8.22	1.61%	0.6	*	0.75	0.15%	-0.9		3.81	0.76%	-0.53		4.15	0.83%	0.99	*
C	51.04		3.09	0.62%	-0.91		3.04	0.61%	-0.08	*	5.56	1.11%	-0.16		1.52	0.30%	-0.29	
D	53.98	*	7.96	1.59%	0.52	*	4.6	0.92%	0.47	*	6.6	1.32%	0.05		0.5	0 10%	-0.79	
E	54 18	*	10.36	2.07%	1.23	*	3.64	0.73%	0.13	*	4.07	0.81%	-0.47		0	0.00%	-1.03	
F	51.09		4.7	0.94%	-0.43		1.2	0.24%	-0.74		2.4	0.48%	-0.82		0	0.00%	-1.03	
G	49.63		0.75	0.15%	-1.59		0.75	0.15%	-0.9		6.76	1.35%	0.09		1	0.20%	-0.54	
H	55.25	*	6.49	1.30%	0.09	*	6 35	1.27%	1.09	*	9.77	1.95%	0.72	*	0	0.00%	-1.03	
I	59.22	*	12.43	2.49%	1.83	*	16.89	3.38%	4.84	*	1.22	0.24%	-1.07		0	0.00%	-1.03	
J	52.64	*	5.38	1.08%	-0.23	*	2.45	0 49%	-0.3	*	5.06	1.01%	-0.27		0.5	0.10%	-0.79	
K	51.84		4.14	0.83%	-0.6		2 64	0.53%	-0.23	*	1.97	0.39%	-0.91		0	0.00%	-1.03	
L	53.09	*	7.05	1.41%	0.25	*	2.2	0.44%	-0.39	*	4 62	0.92%	-0.36		0	0.00%	-1.03	
M	54.37	*	12.56	2.51%	1.87	*	0.5	0.10%	-0 99		7.5	1.50%	0.24	*	0.5	0.10%	-0.79	
N	54.3	*	10.92	2.18%	1.39	*	1	0.20%	-0.81		7.53	1.51%	0.25	*	0.5	0.10%	-0.79	
O	49.49		1	0.20%	-1.52		1	0.20%	-0.81		4	0.80%	-0.49		1	0.20%	-0.54	
P	54.57	*	9.68	1 94%	1.03	*	2.61	0.52%	-0.24	*	14.79	2.96%	1 77	*	1 5	0.30%	-0.3	
Q	50.45		9.99	2.00%	1.12	*	1.5	0.30%	-0 63		6.46	1.29%	0.03		4	0.80%	0.92	*
R	53.73	*	9.15	1.83%	0.87	*	3.72	0.74%	0.16	*	4 19	0.84%	-0.45		0	0.00%	-1 03	
S	53 76	*	7.71	1.54%	0.45	*	4.3	0.86%	0 36	*	8.16	1 63%	0.38	*	0	0.00%	-1.03	
T	54.18	*	2 7	0.54%	-1.02		12.24	2.45%	3.19	*	2.62	0.52%	-0 78		0	0.00%	-1.03	
U	50.63		2	0.40%	-1.23		1.5	0.30%	-0.63		1 5	0.30%	-1.01		0.5	0.10%	-0.79	
V	50.44		3	0.60%	-0.93		0.5	0.10%	-0.99		1 5	0.30%	-1.01		0	0.00%	-1 03	
W	47.27	*	2.5	0.50%	-1.08		0	0.00%	-1 17		7.95	1.59%	0.34	*	5.95	1.19%	1.87	*
X	49.15		2.03	0.41%	-1.22		2.03	0 41%	-0.45	*	1.01	0.20%	-1.11		2 03	0.41%	-0.04	
Y	50.46		2.34	0.47%	-1.13		1.5	0.30%	-0.63		2	0.40%	-0.91		1.5	0.30%	-0.3	
Z	52.27		7.39	1.48%	0.35		0.5	0.10%	-0.99		10.99	2.20%	0.97	*	2.12	0.42%	0.01	

Key

* Outwith 'normal range'

FS Frequency score

Appendix 7I.2
DICTION scores for MV 'optimism' and component variables [CS]
[actual text]

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Trust Id.	[6] CV_{sub} 'hardship'				[7] CV_{sub} 'denial'			
	FS	*%*	*z-score*		*FS*	*%*	*z-score*	
A	0	0.00%	-1.27		2	0.40%	-1.15	
B	2.5	0.50%	-0.73		5.15	1.03%	-0.34	
C	1.01	0.21%	-1.05		3.11	0.62%	-0.86	
D	1.24	0.25%	-1		2	0.40%	-1.15	
E	0	0.00%	-1.27		2.57	0.51%	-1	
F	1.2	0.24%	-1.01		2.4	0.48%	-1.04	
G	0.75	0.15%	-1.11		4.96	0.99%	-0.38	
H	2.12	0.42%	-0.81		0.62	0.12%	-1.5	
I	1	0.20%	-1.06		0.5	0.10%	-1.53	
J	0	0.00%	-1.27		1.1	0.22%	-1.38	
K	0	0.00%	-1.27		1.5	0.30%	-1.28	
L	1.45	0.29%	-0.96		0.25	0.05%	-1.6	
M	1	0.20%	-1.06		1	0.20%	-1.4	
N	1.13	0.23%	-1.03		0	0.00%	-1.66	
O	3	0.60%	-0.62		2	0.40%	-1.15	
P	3.11	0.62%	-0.6		2.11	0.42%	-1.12	
Q	6	1.20%	0.03	*	2.99	0.60%	-0.89	
R	0.5	0.10%	-1.16		2.72	0.54%	-0.96	
S	4.35	0.87%	-0.33	*	1.75	0.35%	-1.21	
T	1.5	0.30%	-0.95		3.31	0.66%	-0.81	
U	1	0.20%	-1.06		0	0.00%	-1.66	
V	2.72	0.54%	-0.68		0	0.00%	-1.66	
W	1	0.20%	-1.06		6.45	1.29%	0	*
X	0	0.00%	-1.27		4.06	0.81%	-0.62	
Y	0.5	0.10%	-1.16		0	0.00%	-1.66	
Z	3.67	0.73%	-0.48		0.75	0.15%	-1.47	

Key

* Outwith 'normal range'

FS Frequency score

Appendix 7J.1
DICTION scores for MV 'activity' [CS and MR]
[actual text]

Trust Id.		CS *DICTION* score MV 'activity' [actual text]		MR *DICTION* score MV 'activity' [actual text]
	A	48.93		47.38
	B	47.6		50.74
	C	47.3		48.42
App. 6B	**D**	48.98		48.21
	E	46.43		47.96
	F	48.29		49.55
	G	50.89		48.61
	H	49.65		48.6
	I	46.34		48.11
	J	49.67		50.75
	K	49.72		50.04
	L	44.39	*	47.89
	M	50.37		44.62
	N	47.71		45.2
	O	50.3		48.71
	P	50.36		50.19
	Q	42.83	*	48.37
	R	46.27		48.61
	S	48.51		47.98
	T	47.33		48.93
	U	49.75		49.47
	V	49.06		50.25
	W	48.64		49.1
	X	50.53		46.95
	Y	48.14		[Note 1]
	Z	50.26		51.27

Key
* Outwith 'normal range'

Notes
1. The annual report for this trust did not include a Manager's report.

Appendix 7J.2
DICTION scores for MV 'activity' and component variables [CS]
[actual text]

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Trust Id.	[1] MV 'activity'		[2] CV_{add} 'aggression'				[3] CV_{add} 'accomplishment'				[4] CV_{add} 'communication'				[5] CV_{add} 'motion'			
			FS	*%*	*z-score*		*FS*	*%*	*z-score*		*FS*	*%*	*z-score*		*FS*	*%*	*z-score*	
A	48.93		1	0.20%	-1.02		17	3.40%	0.28	*	3	0.60%	-0.84	*	-	-	-1.08	
B	47.6		0.25	0.05%	-1 19		25.6	5.12%	1.19		0.79	0.16%	-1 3		4.4	0.88%	1 02	*
C	47.3		0.52	0.10%	-1.13		16.07	3.21%	0.18	*	5.84	1.17%	-0.24		1.02	0.20%	-0.59	
D	48.98		3.11	0.62%	-0.53		23.92	4.78%	1.02		2.47	0.49%	-0.94		1.12	0.22%	-0.55	
E	46.43		-	-	-1.25	*	19.36	3.87%	0.53		6.32	1.26%	-0.14	*	1	0.20%	-0 6	
F	48.29		2 4	0.48%	-0.7		23.98	4.80%	1.02		4.09	0.82%	-0.61		-	-	-1.08	
G	50.89		2.13	0.42%	-0.76		24.65	4.93%	1.09		4.09	0.82%	-0.61		3.99	0.80%	0.83	*
H	49.65		1.62	0.32%	-0.87		18.33	3.67%	0.42	*	4.54	0.91%	-0.51		3.12	0.62%	0.41	
I	46.34		1	0.20%	-1.02		33.22	6.64%	2		2.23	0.45%	-0.99		-	-	-1.08	
J	49.67		2.58	0.52%	-0.65		20.51	4 10%	0.65		2 84	0.57%	-0.87		4.55	0.91%	1.1	*
K	49.72		1	0.20%	-1.02		15.68	3 14%	0.14	*	1.47	0.29%	-1.15		3.79	0.76%	0.73	*
L	44.39	*	3.14	0.63%	-0.53		20.37	4.07%	0.64		2 73	0.55%	-0.89		1.45	0.29%	-0.39	
M	50.37		3.52	0.70%	-0.44		22.58	4.52%	0.87		6.44	1.29%	-0.12	*	1	0.20%	-0.6	
N	47 71		1.63	0.33%	-0.87		20.81	4 16%	0.68		0.23	0.05%	-1.41		2 76	0.55%	0.24	
O	50.3		1	0.20%	-1.02		26	5.20%	1.24		2	0.40%	-1.04		1	0.20%	-0.6	
P	50.36		2	0.40%	-0.79		18.68	3.74%	0.46	*	1.5	0.30%	-1.15		3	0.60%	0.35	
Q	42 83	*	-	-	-1.25	*	11.44	2.29%	-0.31	*	1.85	0.37%	-1.08		0.5	0.10%	-0.84	
R	46 27		1.5	0.30%	-0.9		17.43	3.49%	0.33	*	2	0.40%	-1.04		2.5	0.50%	0.11	
S	48.51		3.6	0.72%	-0.42		16.95	3.39%	0.27	*	2.61	0.52%	-0.92		2.5	0.50%	0 11	
T	47.33		0.5	0.10%	-1.13		19.24	3.85%	0 52		5.94	1.19%	-0 22		-	-	-1.08	
U	49.75		1.5	0.30%	-0.9		12	2.40%	-0.25	*	15.72	3 14%	1.82	*	1	0.20%	-0.6	
V	49.06		0.75	0.15%	-1.07		13 93	2.79%	-0.05	*	2.61	0.52%	-0.92		-	-	-1.08	
W	48.64		2	0.40%	-0.79		21.15	4.23%	0.72		1.75	0.35%	-1 1		1	0.20%	-0.6	
X	50.53		-	-	-1.25	*	13.98	2.80%	-0.04	*	2.27	0.45%	-0.99		3 04	0 61%	0.37	
Y	48.14		3	0.60%	-0.56		14.5	2.90%	0.01	*	2.23	0.45%	-0.99		0.5	0 10%	-0.84	
Z	50.26		3 46	0.69%	-0.45		22.38	4.48%	0.85		1.43	0.29%	-1.16		1.71	0.34%	-0.26	

Key

* Outwith 'normal range'

FS Frequency score

Appendix 7J.2
DICTION scores for MV 'activity' and component variables [CS]
[actual text]

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Trust Id.	[6] CV_{sub} 'cognitive terms'				[7] CV_{sub} 'passivity'				[8] CV_{sub} 'embellishment'	
	FS	*%*	*z-score*		*FS*	*%*	*z-score*		*CS*	*z-score*
A	6	1.20%	-0.68		3.94	0.79%	-0.38		0.4	-0.52
B	8.76	1.75%	-0.12		11.96	2.39%	2.3	*	0.63	-0.05
C	8.26	1.65%	-0.22		7.6	1.52%	0.84	*	0.8	0.3
D	7.61	1.52%	-0.35		3.65	0.73%	-0.48		1.07	0.85
E	12.93	2.59%	0.73	*	7.14	1.43%	0.69		0.99	0.7
F	9.59	1.92%	0.05		5.36	1.07%	0.09		0.75	0.21
G	6.51	1.30%	-0.58		7.29	1.46%	0.74	*	0.41	-0.49
H	5.11	1.02%	-0.86		6.65	1.33%	0.52		0.72	0.14
I	6.46	1.29%	-0.59		12.34	2.47%	2.43	*	1.01	0.73
J	3.03	0.61%	-1.28		7.5	1.50%	0.81	*	1.16	1.03
K	5.06	1.01%	-0.87		5.14	1.03%	0.02		0.57	-0.17
L	6.95	1.39%	-0.49		19.63	3.93%	4.86	*	0.69	0.07
M	3.5	0.70%	-1.19		4.52	0.90%	-0.19		1.01	0.73
N	2.26	0.45%	-1.44		4.13	0.83%	-0.32		1.97	2.69
O	7	1.40%	-0.48		4	0.80%	-0.36		0.21	-0.89
P	3.5	0.70%	-1.19		5.76	1.15%	0.22		0.4	-0.52
Q	9.45	1.89%	0.02		9.48	1.90%	1.47	*	1.73	2.21
R	10.39	2.08%	0.21	*	8.72	1.74%	1.21	*	1.04	0.8
S	3.74	0.75%	-1.14		5.85	1.17%	0.26		1.35	1.43
T	2.5	0.50%	-1.39		11.9	2.38%	2.28	*	0.58	-0.14
U	17	3.40%	1.55	*	4.34	0.87%	-0.25		0.17	-0.98
V	5	1.00%	-0.88		3.57	0.71%	-0.51		0.26	-0.79
W	7.91	1.58%	-0.29		5.44	1.09%	0.12		0.54	-0.23
X	3.97	0.79%	-1.09		2.03	0.41%	-1.02		0.5	-0.31
Y	4.96	0.99%	-0.89		5.71	1.14%	0.21		0.73	0.16
Z	3.96	0.79%	-1.1		3.95	0.79%	-0.38		0.75	0.19

Key

* Outwith 'normal range'

FS Frequency score

CS Calculated score

Appendix 7K.1
DICTION scores for MV 'realism' [CS and MR]
[actual text]

Trust Id.		CS *DICTION* score MV 'realism' [actual text]		MR *DICTION* score MV 'realism' [actual text]	
	A	47.47		46.66	
	B	42.89		45	
	C	44.06		45.59	
App. 6B	**D**	45.54		49.76	*
	E	45.94		44.27	
	F	46.05		46.69	
	G	50.72	*	47.16	*
	H	45.98		45.54	
	I	47.45	*	50.64	*
	J	49.31	*	50.58	*
	K	47	*	44.17	
	L	46.18		46.48	
	M	46.31		42.35	
	N	47.57	*	44.79	
	O	46.14		48.34	*
	P	45.68		44.3	
	Q	46.74		47.66	*
	R	48.32	*	44.51	
	S	45.66		47.82	*
	T	47.81		49.47	*
	U	42.42		47.77	*
	V	48.92	*	44.58	
	W	44.11		45.38	
	X	46.59		46.83	
	Y	46.54		[Note 1]	
	Z	50.14	*	48.91	*

Key
* Outwith 'normal range'

Notes
1. The annual report for this trust did not include a Manager's report.

Appendix 7K.2
DICTION scored for MV 'realism' and component variables [CS]
[actual text]

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Trust Id.	[1] MV 'realism'		[2] CV_{add} 'familiarity'				[3] CV_{add} 'spatial terms'				[4] CV_{add} 'temporal terms'				[5] CV_{add} 'present concern'			
			FS	*%*	*z-score*		*FS*	*%*	*z-score*		*FS*	*%*	*z-score*		*FS*	*%*	*z-score*	
A	47.47		146	29.20%	0.92	*	3	0.60%	-1.15		30	6.00%	2.22	*	9.11	1.82%	-0.57	*
B	42.89		101.82	20.36%	-2.09	*	2.86	0.57%	-1.17		22.02	4.40%	1.03	*	12.82	2.56%	0.2	*
C	44.06		136.35	27.27%	0.26		2.97	0.59%	-1.15		17.5	3.50%	0.36		3.64	0.72%	-1.71	
D	45.54		130.03	26.01%	-0.17		4.34	0.87%	-0.98		16.46	3.29%	0.2		3.74	0.75%	-1.68	
E	45.94		131.32	26.26%	-0.08		3.29	0.66%	-1.11		11.64	2.33%	-0.51		9	1.80%	-0.59	*
F	46.05		127.1	25.42%	-0.37		2.85	0.57%	-1.17		17.99	3.60%	0.43		5.4	1.08%	-1.34	
G	50.72	*	152.37	30.47%	1.35	*	5.32	1.06%	-0.85		22.03	4.41%	1.03	*	4.24	0.85%	-1.58	
H	45.98		144.4	28.88%	0.81	*	4.73	0.95%	-0.93		13.1	2.62%	-0.3		6.63	1.33%	-1.08	
I	47.45	*	136.89	27.38%	0.3		0.5	0.10%	-1.47		18.46	3.69%	0.5		4.28	0.86%	-1.57	
J	49.31	*	155.53	31.11%	1.57	*	4.89	0.98%	-0.91		23.13	4.63%	1.19	*	4.33	0.87%	-1.56	
K	47	*	146.37	29.27%	0.94	*	1.69	0.34%	-1.32		28.27	5.65%	1.96	*	4.39	0.88%	-1.54	
L	46.18		156.14	31.23%	1.61	*	5.2	1.04%	-0.87		15.98	3.20%	0.13		7.22	1.44%	-0.96	
M	46.31		137.88	27.58%	0.36	*	1.22	0.24%	-1.38		12.02	2.40%	-0.46		10.04	2.01%	-0.37	*
N	47.57	*	136.72	27.34%	0.29		5.44	1.09%	-0.84		16.42	3.28%	0.2		5.26	1.05%	-1.36	
O	46.14		137	27.40%	0.3		1	0.20%	-1.4		20	4.00%	0.73		9	1.80%	-0.59	*
P	45.68		144.35	28.87%	0.81	*	8.31	1.66%	-0.47		12.95	2.59%	-0.32		3.5	0.70%	-1.73	
Q	46.74		141.37	28.27%	0.6	*	4	0.80%	-1.02		20.983	4.20%	0.87	*	2.83	0.57%	-1.87	
R	48.32	*	156.8	31.36%	1.66	*	3.65	0.73%	-1.07		22.05	4.41%	1.03	*	8.33	1.67%	-0.73	
S	45.66		134.05	26.81%	0.1		2.98	0.60%	-1.15		18.86	3.77%	0.56		3.05	0.61%	-1.82	
T	47.81	*	143.72	28.74%	0.76	*	2.18	0.44%	-1.25		22.24	4.45%	1.06	*	3.59	0.72%	-1.71	
U	42.42		136.5	27.30%	0.27		8.37	1.67%	-0.46		9	1.80%	-0.9		18.5	3.70%	1.38	*
V	48.92	*	151.3	30.26%	1.28	*	3.47	0.69%	-1.09		27.73	5.55%	1.88	*	10.39	2.08%	-0.3	*
W	44.11		133.02	26.60%	0.03		6.66	1.33%	-0.68		10.13	2.03%	-0.74		9.45	1.89%	-0.5	*
X	46.59		132.86	26.57%	0.02		3.93	0.79%	-1.03		14.71	2.94%	-0.06		6.14	1.23%	-1.18	
Y	46.54		140	28.00%	0.51	*	3.75	0.75%	-1.05		17.75	3.55%	0.4		3.61	0.72%	-1.71	
Z	50.14	*	149.67	29.93%	1.17	*	12.54	2.51%	0.07	*	20.9	4.18%	0.86	*	11.54	2.31%	-0.06	*

Key

* Outwith 'normal range'

FS Frequency score

Appendix 7K.2
DICTION scored for MV 'realism' and component variables [CS]
[actual text]

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Trust Id.	[6] CV_{add} 'human interest'				[7] CV_{add} 'concretedness'				[8] CV_{sub} 'past concern'				[9] CV_{sub} 'complexity'		
	FS	*%*	*z-score*		*FS*	*%*	*z-score*		*FS*	*%*	*z-score*		*CS*	*z-score*	
A	3	0.60%	-2.11		13	2.60%	-0.74		5	1.00%	0 54	*	4.78	0.55	
B	18.27	3.65%	-0.99	*	14.05	2.81%	-0.62		6.9	1.38%	1.27	*	5.27	2.19	
C	10.74	2.15%	-1.54		9.74	1.95%	-1.11	*	3.09	0.62%	-0.19		4.98	1 24	
D	14 18	2.84%	-1.29	*	25.31	5.06%	0.64		5.36	1.07%	0.68	*	4.76	0.51	
E	17.51	3.50%	-1.05	*	19.65	3.93%	0.01		3.07	0.61%	-0.19		4.89	0.92	
F	1.2	0.24%	-2.24		27.58	5.52%	0.9		1.2	0 24%	-0.91		4.93	1.08	
G	11.68	2.34%	-1.47		40.02	8.00%	2.29	*	0.75	0.15%	-1.08		4.95	1.14	
H	7.98	1.60%	-1.74		28.17	5.63%	0.96		4 49	0.90%	0 35	*	5.03	1.39	
I	17.89	3.58%	-1.02	*	24.39	4.88%	0.54		1	0.20%	-0.99		4.86	0.82	
J	0.5	0.10%	-2.29		28.44	5 69%	0.99		0.75	0.15%	-1.08		4.84	0.78	
K	6.58	1.32%	-1.84		19 8	3.96%	0.02		3.64	0 73%	0.02		4.97	1.2	
L	9.98	2.00%	-1.6		15.42	3.08%	-0 47		3 45	0 69%	-0.05		5.13	1.72	
M	9 54	1.91%	-1 63		21.08	4.22%	0.17		2	0.40%	-0.61		4 91	0.99	
N	6.66	1.33%	-1.84		32.49	6.50%	1 45	*	1	0.20%	-0.99		5	1 3	
O	6	1.20%	-1.89		22	4 40%	0.27		4	0.80%	0.16	*	4 95	1.12	
P	3.73	0 75%	-2.05		19 4	3.88%	-0.02		1 5	0.30%	-0.8		5.01	1.32	
Q	21.97	4.39%	-0.72	*	20.98	4.20%	0.15		4.99	1.00%	0.54	*	4.83	0.74	
R	6.93	1.39%	-1.82		29.52	5.90%	1.11		3	0.60%	-0.22		5.24	2.1	
S	3.75	0.75%	-2.05		30.81	6 16%	1.26		2.8	0.56%	-0.3		5.07	1.53	
T	27.97	5.59%	-0.28	*	13.62	2.72%	-0.67		1.5	0.30%	-0.8		4 88	0.89	
U	4	0.80%	-2.03		23.5	4.70%	0.44		15.5	3.10%	4.57	*	5.12	1.7	
V	15.65	3.13%	-1.18	*	12.83	2.57%	-0.76		4.72	0.94%	0.44	*	4.75	0.47	
W	1	0.20%	-2.25		32.06	6.41%	1 4	*	7.45	1 49%	1.48	*	5.11	1 67	
X	16 23	3.25%	-1.14	*	10 14	2.03%	-1.06		3 04	0.61%	-0 21		4 36	-0.84	*
Y	3	0.60%	-2.11		26	5.20%	0.72		2	0.40%	-0.61		4.86	0.82	
Z	5.67	1.13%	-1 91		20.49	4 10%	0.1		1.25	0.25%	-0.89		4 9	0.98	

Key

* Outwith 'normal range'

FS Frequency score

CS Calculated score

Appendix 7L.1
DICTION scores for MV 'commonality' [CS and MR] [actual text]

Trust Id.		CS *DICTION* score MV 'commonality' [actual text]		MR *DICTION* score MV 'commonality' [actual text]	
	A	55.64	*	43.97	*
	B	54.43		52.1	
	C	53.56		50.65	
App. 6B	**D**	48.43		48.47	
	E	53.02		48.96	
	F	52.62		50	
	G	51.6		47.46	*
	H	51.18		46.38	*
	I	49.96		46.17	*
	J	50.68		49.98	
	K	50.6		39.19	*
	L	51.06		46.04	*
	M	47.92	*	46.83	*
	N	54.35		47.07	*
	O	52.24		50.22	
	P	46.76	*	47.82	*
	Q	52.87		47.02	*
	R	50.3		49.78	
	S	49.21		47.84	*
	T	53.25		46.64	*
	U	57.7	*	49.84	
	V	51.31		50.49	
	W	50.09		49.76	
	X	55.07		45.39	*
	Y	52.76		[Note 1]	
	Z	48.52		50.84	

Key
* Outwith 'normal range'

Notes
1. The annual report for this trust did not include a Manager's report.

Appendix 7L.2
DICTION scores for 'commonality' and component variables [CS]
[actual text]

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Trust Id.	[1] MV 'commonality'		[2] CV_{add} 'centrality'				[3] CV_{add} 'co-operation'				[4] CV_{add} 'rapport'				[5] CV_{sub} 'diversity'			
			FS	*%*	*z-score*		*FS*	*%*	*z-score*		*FS*	*%*	*z-score*		*FS*	*%*	*z-score*	
A	55.64	*	8	1.60%	1.14		15	3.00%	2.62		4	0.80%	0.86	*	-	-	-1.04	
B	54.43		7.9	1.58%	1.11		8.15	1.63%	0.93		2.5	0.50%	0.08	*	-	-	-1.04	
C	53.56		6.11	1.22%	0.55		10.37	2.07%	1.48		3.02	0.60%	0.36	*	1	0.2	-0.5	
D	48.43		4.1	0.82%	-0.08		6.86	1.37%	0.61		-	-	-1.22		0.5	0.1	-0.77	
E	53.02		5.14	1.03%	0.25		6.57	1.31%	0.54		5.64	1.13%	1.72	*	3.07	0.61	0.61	
F	52.62		2.4	0.48%	-0.62		13.19	2.64%	2.18		1.2	0.24%	-0.59		1.2	0.24	-0.4	
G	51.6		3.74	0.75%	-0.2		13.68	2.74%	2.3		1	0.20%	-0.7		3.24	0.65	0.69	
H	51.18		4.11	0.82%	-0.08		13.6	2.72%	2.28		2.87	0.57%	0.27	*	1.62	0.32	-0.17	
I	49.96		1	0.20%	-1.06	*	1.5	0.30%	-0.72	*	3	0.60%	0.34	*	1	0.2	-0.5	
J	50.68		4.2	0.84%	-0.05		8.1	1.62%	0.92		4.45	0.89%	1.1	*	1.6	0.32	-0.18	
K	50.6		5.64	1.13%	0.4		10.79	2.16%	1.58		1.5	0.30%	-0.44		5.43	1.09	1.87	*
L	51.06		7.21	1.44%	0.9		5.7	1.14%	0.32		1.75	0.35%	-0.31		0.25	0.05	-0.9	
M	47.92	*	13.56	2.71%	2.89	*	3	0.60%	-0.35	*	0.5	0.10%	-0.96		3.52	0.7	0.85	
N	54.35		5.13	1.03%	0.24		10.02	2.00%	1.39		4.13	0.83%	0.93	*	1.13	0.23	-0.43	
O	52.24		7	1.40%	0.83		12	2.40%	1.88		1	0.20%	-0.7		-	-	-1.04	
P	46.76	*	1	0.20%	-1.06	*	5.61	1.12%	0.3		1.5	0.30%	-0.44		0.5	0.1	-0.77	
Q	52.87		1.5	0.30%	-0.9		11.99	2.40%	1.88		0.5	0.10%	-0.96	*	-	-	-1.04	
R	50.3		5.72	1.14%	0.43		8.72	1.74%	1.07		3.5	0.70%	0.6	*	3.22	0.64	0.68	
S	49.21		2.25	0.45%	-0.66		5.75	1.15%	0.33		1.75	0.35%	-0.31		2.8	0.56	0.46	
T	53.25		2.81	0.56%	-0.49		7.81	1.56%	0.84		6.12	1.22%	1.97	*	1	0.2	-0.5	
U	57.7	*	15.5	3.10%	3.5	*	17.5	3.50%	3.24		1.5	0.30%	-0.44		1.5	0.3	-0.44	
V	51.31		4.22	0.84%	-0.04		5.5	1.10%	0.27		4.72	0.94%	1.24	*	0.5	0.1	-0.77	
W	50.09		6	1.20%	0.52		7.5	1.50%	0.77		1.25	0.25%	-0.57		0.5	0.1	-0.77	
X	55.07		8.11	1.62%	1.18		16.23	3.25%	2.93		2.03	0.41%	-0.16		-	-	-1.04	
Y	52.76		6.5	1.30%	0.67		10.5	2.10%	1.51		3	0.60%	0.34	*	1	0.2	-0.5	
Z	48.52		4.71	0.94%	0.11		5.96	1.19%	0.39		1.5	0.30%	-0.44		1.5	0.3	-0.24	

Key

* Outwith 'normal range'

FS Frequency score

Appendix 7L.2
DICTION scores for 'commonality' and component variables [CS]
[actual text]

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Trust Id.	[6] CV_{sub} 'exclusion'				[7] CV_{sub} 'liberation'			
	FS	%	*z-score*		*FS*	%	*z-score*	
A	4	0.80%	0.86		-	-	-0.82	
B	0.75	0.15%	-0.64		0.5	0.1	-0.63	
C	2.02	0.40%	-0.05		0.52	0.1	-0.62	
D	7.08	1.42%	2.28		0.5	0.1	-0.63	
E	1.5	0.30%	-0.29		-	-	-0.82	
F	1.2	0.24%	-0.43		-	-	-0.82	
G	2	0.40%	-0.06		-	-	-0.82	
H	7.1	1.42%	2.28		-	-	-0.82	
I	2	0.40%	-0.06		-	-	-0.82	
J	7.1	1.42%	2.29		-	-	-0.82	
K	1.5	0.30%	-0.29		0.5	0.1	-0.63	
L	5.14	1.03%	1.38		0.5	0.1	-0.63	
M	10.04	2.01%	3.64	*	-	-	-0.82	
N	1	0.20%	-0.53		-	-	-0.82	
O	4	0.80%	0.86		2	0.4	-0.05	*
P	7.84	1.57%	2.63		2.61	0.52	0.19	*
Q	-	-	-0.99	*	-	-	-0.82	
R	5.93	1.19%	1.75		0.5	0.1	-0.63	
S	3.05	0.61%	0.42		0.25	0.05	-0.73	
T	3	0.60%	0.4		-	-	-0.82	
U	1	0.20%	-0.53		0.5	0.1	-0.63	
V	5.93	1.19%	1.75		-	-	-0.82	
W	6.95	1.39%	2.22		-	-	-0.82	
X	2.03	0.41%	-0.05		2.03	0.41	-0.04	*
Y	4.5	0.90%	1.09		-	-	-0.82	
Z	6.14	1.23%	1.84		1.96	0.39	-0.06	*

Key

* Outwith 'normal range'

FS Frequency score

CHAPTER 8

SUMMARY AND CONCLUSIONS

8.1 Introduction and summary

This chapter summarises and concludes on the study. Following an overview in this section of the structure of the thesis and progression of argument, section 8.2 considers in detail the contribution of this research. Sections 8.3 to 8.5 reflect on a number of areas for further research. Section 8.3 considers how the methods developed in this study might be further refined and developed. Section 8.4 considers the potential of the methods for empirical applications. Section 8.5 considers the potential for developing further methods. Section 8.6 reflects on the expansion in the portfolio of approaches available to the accounting researcher, indicative of a move towards a holistic approach to text analysis. The limitations of the study are discussed in section 8.7. Section 8.8 concludes with an overview of the implications of the study.

It is helpful at the outset to summarise the specific objectives of this research as set out in section 1.2.2 and Table 1.1. For ease of reference these objectives are listed here as Table 8.1.

Table 8.1
Specific research objectives

Specific research objectives:	
Primary research objective:	
1.	In response to areas of weakness and gaps identified in the literature, to develop text-focused methods of evaluating accounting narratives, which can be used by accounting researchers investigating impression management.
Secondary research objectives:	
2.1	To investigate whether the narratives of 'good performers' and 'poor performers' exhibit differential reporting patterns.
2.2	To investigate whether different accounting narratives exhibit differential reporting patterns.
2.3	To synthesise the empirical literature in relation to the investigation of impression management in accounting narratives in corporate reports.

In order to pursue these objectives, chapter 2 reviewed existing methods of evaluation in the accounting domain. A critique of these methods identified areas of weakness and gaps. A general line of criticism pointed to a lack of emphasis on the syntactic dimension. A specific focus of critique concerned the weaknesses of readability formulas and the need for an alternative approach. The chapter also identified a framework of methodological assessment criteria. This framework not only provided a context for critique but was also identified as a referent for the development of new methods. Three research questions were developed in the context of this critique (section 2.7 and Table 2.2).

Chapter 3 reviewed empirical studies investigating impression management in accounting narratives in corporate reports. There were two reasons for including this review: the first related to the methodological contribution of the study; the second, to the empirical contribution. Since the methods developed in this study are specifically oriented towards the investigation of impression management, it was necessary to identify the research designs and measurement models that characterise the literature. Like the general methodological assessment criteria identified in chapter 2, the specific requirements of accounting researchers investigating impression management were

identified as a framework of reference for the development of methods. In relation to the empirical contribution, the review provided an appropriate context for developing the empirical application and for discussing the results. In terms of developing the application three areas were identified: first, the need for empirical evidence in relation to the syntactic aspects of narratives; second, the need for research into narratives beyond the Chairman's statement, in particular 'OFR-type' narratives; and third, the need for research in a UK context. Five research questions were developed in the context of this critique (section 3.9 and Table 3.2). Finally, as far as the author is aware, no comprehensive review of this nature, taking in such a broad spectrum of impression management studies, has been published.

Chapter 4 functioned as a bridge between the literature reviews in chapters 2 and 3, and the detailed development chapters, 5 and 6. The research questions emerging from the literature reviews were summarised, and an additional question was added (Table 4.1). This additional question acknowledged the potential for developing methods from the managerial business communications literature, for use in accounting applications investigating impression management. Based on the issues emerging from the literature reviews in chapters 2 and 3, and in light of developments in the managerial business communications literature, three text-focused methods were identified for development: the texture index, a transitivity index and *DICTION* analysis. All of these methods have a sound theoretical basis in linguistics, a factor which is fundamental to the whole orientation of this study. Drawing on approaches that are developed and validated in such a specialist literature allows the accounting researcher to probe deeper into accounting narratives in the knowledge that the methods are based on sound linguistic principles. In demonstrating that the methods have a sound theoretical basis in linguistics, a two-fold approach was embraced. First, the locus of the method in applied linguistics was discussed. In this regard, all of the methods developed fall within the scope of a systemic approach to language study. The focus of the systemic approach is how linguistic structures are exploited in strategic narrative construction. The relevance of these methods for the investigation of impression management in accounting narratives has been demonstrated through the progression of the study. The second stage of theoretical justification was to move beyond the applied linguistic orientation to a theoretical or formalist linguistics literature, where the linguistic principles underlying the applied approaches were developed.

The texture index was developed and illustrated in chapter 5. This method was developed in response to the specific call in the literature for a text-focused alternative to readability formulas. The texture index was developed from the applied linguistics literature, having not previously been used in an accounting-related application. The texture index goes some way towards redressing the lack of emphasis on the syntactic dimension exhibited in the existing portfolio of approaches, identified as a general line of criticism in chapter 2. A detailed theoretical justification of the method, drawing on the literatures of applied systemic linguistics and theoretical linguistics, demonstrated the validity of the approach as an alternative to readability formulas. Finally, the approach was reviewed and assessed as satisfactory in terms of the recognised methodological assessment criteria identified in the accounting literature.

The transitivity index and *DICTION* analysis were developed and illustrated in chapter 6. These approaches were included in the same development chapter since they share a common line of development from the managerial business communications literature. The transitivity index, like the texture index, goes some way towards redressing the lack of emphasis on the syntactic dimension. As a form-oriented, thematic content analysis approach, *DICTION* is included principally because of its appropriateness for the investigation of impression management. Both approaches were reviewed and assessed as satisfactory in terms of the recognised methodological assessment criteria. Like the texture index, a detailed theoretical justification of these approaches was included, although cognisance was taken of theoretical discussions in the managerial business communications literature where these methods have been employed, to a greater or lesser extent. Table 8.2 summarises the lines of development pursued in this study.

Table 8.2
Summary of lines of development

Accounting literature [this study]	Managerial business communications literature	Applied linguistics: A systemic approach	Theoretical basis in linguistics
←	←	←	←
Line 1:			
Texture index		Texture index	Standards of textual communication
Line 2:			
Transitivity index	Measure of transitivity	Measure of transitivity	Transitivity
DICTION analysis	*DICTION* analysis ['certainty' variable]	*DICTION* analysis [five variables]	Linguistic semantics

The illustrative empirical application in chapter 7 served two purposes. First, the aptitude of the texture index, the transitivity index and *DICTION* analysis for investigating impression management, was demonstrated. Second, the application made an empirical contribution to the impression management literature.

8.2 Contribution of the research

This section summarises the contribution of this research. Section 8.2.1 reflects on the contribution in pursuit of the general research objectives. Section 8.2.2 focuses on the specific research objectives. Section 8.2.3 summarises the contribution to knowledge.

8.2.1 Contribution in pursuit of general research objectives

In pursuit of the general research objective to advance research into accounting narratives (section 1.2.1), this study has contributed three methods of evaluation to the existing portfolio of approaches. The methods developed have a particular orientation towards the investigation of impression management. In addition to this methodological contribution, the study has contributed to the emerging body of empirical evidence investigating impression management in accounting narratives.

8.2.2 Contribution in pursuit of specific research objectives

Specific research objectives are categorised as primary and secondary. The primary objective reflects the overall methodological orientation of the study. Contributions in pursuit of the primary research objective are detailed in section 8.2.2.1. Section 8.2.2.2 focuses on contributions in pursuit of the secondary research objectives.

8.2.2.1 Contribution in pursuit of primary research objective

Table 8.3 details contributions in pursuit of the primary research objectives.

Table 8.3
Contribution in pursuit of primary research objective

Specific research contributions [in relation to specific research objectives]:

Primary research objective:

1. In response to areas of weakness and gaps identified in the literature, to develop text-focused methods of evaluating accounting narratives, which can be used by accounting researchers investigating impression management.

Research contributions:

Three text-focused methods were developed, which contribute to a richer empirical analysis of accounting narratives:

Texture index

- The texture index or indexical approach was developed as an alternative to readability formulas, in response to a particular call in the literature.
- The approach analyses text across a number of dimensions and embodies a number of features, which render it attractive to accounting researchers.
- Detailed decision rules for application and a pro-forma scoring sheet were developed and illustrated for a sample narrative.

Transitivity index

- The transitivity index is a measure of the number of passive constructions in a text.
- Links were established with studies investigating patterns of causal reasoning and attribution in accounting narratives.
- Detailed rules for application were developed and illustrated for a sample narrative.

Specific research contributions [in relation to specific research objectives]:

***DICTION* analysis**

- *DICTION* is a commercially available computerised form-oriented thematic content analysis software programme that analyses a text for verbal tone. Verbal tone is measured in terms of five master variables: 'certainty', 'optimism', 'activity', 'realism' and 'commonality'.
- The approach generates index scores for the five master variables and the component variables, which are the basis of the master variable scores. In all, *DICTION* reports scores for 39 variables.
- This study builds on a limited 'accounting' application in the managerial business communications literature, where only the 'certainty' variable is investigated, to exploit *DICTION* to its full potential.

General comments relating to all three methods:

- All three methods have a sound theoretical basis in linguistics (both in applied linguistics and theoretical linguistics).
- The methods satisfy the recognised methodological assessment criteria identified in the accounting literature.
- The aptitude of the methods for use by accounting researchers investigating impression management was demonstrated through an illustrative empirical application. In particular, all of the approaches generate dependent variables, which can be used in tests of differentiation.
- The texture index and transitivity index go some way towards redressing the lack of emphasis on the syntactic dimension, exhibited in the existing portfolio of approaches. The texture index embraces both syntactic analysis and meaning-oriented thematic analysis. The transitivity index focuses solely on syntactic analysis.
- An overview of the methods developed in this study, together with existing methods in the accounting and managerial literatures, point towards a holistic approach to text analysis.

General contribution relating to the primary research objective:

- Fosters an ethos of interdisciplinarity between research communities in accounting and applied linguistics.
- Fosters an ethos of interdisciplinarity between research communities in accounting and managerial business communications.

Three text-focused methods are developed in pursuit of the primary research objective: the texture index or indexical approach, a transitivity index and *DICTION* analysis.

The texture index and transitivity index go some way towards redressing the general lack of emphasis on the syntactic dimension, exhibited in the existing portfolio of approaches. The texture index analyses text across a number of dimensions or indexicals and embodies a number of features, which render it attractive to accounting researchers. It was developed in this study expressly as an alternative to readability formulas, in response to a particular call in the literature. Readability formulas have been criticised as a method for scoring accounting narratives because of their focus on word- and sentence-level features and not on whole-text aspects, their lack of regard for the interests and motivation of the reader, and their inappropriateness for evaluating adult-based and technical accounting narratives. The literature of linguistics offered theoretical and practical validation for application of a texture index, which addresses these criticisms. The study demonstrated how the general model drawn from applied linguistics can be tailored to the specific situation of accounting narratives. Rules which provide for objectivity in replication were specified and illustrated. Further, it was shown that there is no evidence of association between indexical and texture scores and the Flesch readability score.

The transitivity index measures the percentage of passive constructions in a text. The use of passive constructions is associated in the linguistics literature with giving a text a veneer of objectivity, neutrality, scientific 'truth' or fact, used typically in circumstances where writers find it advantageous to distance themselves from the message. In the managerial business communications literature, the use of passive constructions is associated with the narratives of poor performing companies. The literature is, however, predominantly theoretical, with only a limited applied orientation. This study developed the applied orientation in outlining a rigorous approach for the analysis of transitivity. In particular, rules which provide for objectivity in replication were specified and illustrated. The transitivity index developed here employs a manual approach to analysis. In addition to the manual approach, the study investigated the validity and reliability of computerised passive quantification found in the readability statistics of standard word-processing packages. In common with readability formulas such as Flesch, objectivity and ease of use are strengths of the computerised measure of passive quantification. Like readability formulas, however, the validity of the automated approach is questionable. While there was a similarity in the significance

levels of the differences between 'good performers' and 'poor performers' in the results for the manual analysis and the computerised analysis, one must be cautious of concluding that the computerised model is a reliable proxy for the manual approach. For example, it was clear from the median scores reported that the manual approach is more comprehensive in its capture of passive constructions. When the narratives were manually coded to determine the transitivity scores, it was noted that a number of passive constructions were simply omitted from the computerised analysis. Moreover, these omissions were not systematic. At this stage, while it can be surmised that the computerised version *may* function as a useful yardstick or benchmark for the relative passive character of a text, reliance should not be placed in absolute values.

In addition to the applied orientation, which was the main contribution, the theoretical basis of the linguistic analysis of transitivity, demonstrated in its linkage to a general systemic approach and to the underlying theoretical construct of transitivity, is strengthened by drawing on the accounting and managerial literature concerned with causation and attribution. Here the validity of the linguistic approach is strengthened through insights from the accounting domain.

In addition to the texture and transitivity indices, the study advocates the use of *DICTION* analysis. This approach was selected principally because of its relevance and applicability to the investigation of impression management. Its theoretical basis in linguistics is found in applied systemic linguistics and in the theoretical principles associated with linguistic semantics. As an approach, it has been used widely in the applied linguistics and managerial literatures and has been subject to independent validation. *DICTION* is a computerised content analysis program, which examines a text for its verbal tone. Specifically, the program searches a text for five semantic features: 'certainty', 'optimism', 'activity', 'realism' and 'commonality'. In the managerial business communications literature, *DICTION* analysis has been used to investigate the semantic feature 'certainty' in accounting narratives in the annual reports of 'good performing' and 'poor performing' companies. The contribution of this research was to develop the applied orientation in advocating the use of *DICTION* analysis for all five semantic variables. In addition, this study employed a more advanced version of *DICTION* analysis, to that used in the previous limited accounting application. This advanced version allows the general model to be tailored to the specific situation of accounting narratives.

All of the approaches developed were subjected to the recognised methodological assessment criteria identified in the accounting literature. The satisfaction of these criteria was demonstrated for each of the approaches. Moreover, the approaches were developed expressly with regard to the particular requirements of accounting researchers investigating impression management. In this regard, their aptitude for use by accounting researchers investigating impression management, was demonstrated through an illustrative empirical application.

Finally, and in relation to the primary research contributions when taken as a whole, the study fosters an ethos of interdisciplinarity between research communities in accounting and the communities of applied linguistics and managerial business communications. In pursuing such an interdisciplinary approach, the accounting researcher can draw on insights from disciplines whose specialism is the evaluation of narrative. The link to applied linguistics, whether directly or through the managerial business communications literature, has been facilitated by a shift in the linguistics discipline from a formalist to a functionalist paradigm, with the developments of a number of usable methods for analysis for exploitation in the wider communities of social scientific research. This trend has been reflected in other areas of the accounting literature (see e.g. Llewellyn (1999) and Gallhofer *et al.* (2001) (reviewed in section 4.3)). This has a number of implications for further research (see sections 8.5.1, 8.5.2 and 8.8).

8.2.2.2 Contribution in pursuit of secondary research objectives

Table 8.4 summarises the research contribution in relation to the three secondary research objectives.

Table 8.4
Contribution in pursuit of secondary research objectives

Specific research contributions [in relation to specific research objectives]:	
Secondary research objectives:	
2.1	To investigate whether the narratives of 'good performers' and 'poor performers' exhibit differential reporting patterns **Research contributions:** Empirical study contributed to impression management literature: • Mixed results in relation to investigation of differential reporting patterns in the narratives of 'good performers' and 'poor performers' • Extended focus beyond Chairman's statement to encompass 'OFR type' Manager's report • Offered particular insights in relation to narrative reporting practices in a UK context for a particular industry sector – investment trusts
2.2	To investigate whether different accounting narratives exhibit differential reporting patterns **Research contributions:** Empirical study contributed to impression management literature: • Mixed results in relation to investigation of differential reporting patterns in Chairman's statement and Manager's report • Extended focus beyond Chairman's statement to encompass 'OFR type' Manager's report • Offered particular insights in relation to narrative reporting practices in a UK context for a particular industry sector – investment trusts
2.3	To synthesise the empirical literature in relation to the investigation of impression management in accounting narratives in corporate reports **Research contribution:** Literature review included as chapter 3

The study found mixed results in relation to the investigation of differential reporting patterns in the narratives of 'good performers' and 'poor performers' (research objective

2.1) and between the Chairman's statement and the Manager's report (research objective 2.2). In discussing these results, it was argued that the presence *or* absence of differentiation can be indicative of impression management, depending on the particular textual dimension that is being investigated (see in particular here, section 7.9). In relation to the investigation of the Manager's report, the study offered some interesting insights in relation to an 'OFR type' narrative. Moreover, the study offered insights in terms of a UK context for a particular industry sector.

Finally, in relation to objective 2.3, the literature review included as chapter 3 provided an overall synthesis of the empirical literature investigating impression management in accounting narratives in corporate reports.

8.2.3 Summary of contribution to knowledge

This study makes a methodological and an empirical contribution to knowledge. The methodological contribution is the primary focus of the study. Three text-focused methods for evaluating accounting narratives, with a particular orientation towards the investigation of impression management, have been developed and illustrated. In addressing a number of areas of weakness and gaps in the literature, the methods offer to the accounting researcher a significant expansion in the existing portfolio of approaches. The use of these methods in future empirical investigations will contribute to what is an emerging and important body of literature investigating impression management in accounting narratives (see section 8.4).

The study also makes an empirical contribution to knowledge. The investigation of differentiation reported in chapter 7, is a contribution to the impression management literature reviewed in chapter 3. Extending the analysis to include the 'OFR-type' Manager's review and focusing on a UK context, addressed areas that hitherto, have received relatively little attention in the literature. Finally, the synthesis of the empirical impression management literature in chapter 3 is, in itself, a contribution to knowledge. As far as the author is aware, no comparable detailed review of this nature, with a particular focus on impression management, has been published.

8.3 Developing the methods for accounting applications

The texture index, transitivity index and *DICTION* analysis have been developed and illustrated in this study with a sufficient degree of rigour that they can be used by the wider community of accounting researchers in empirical studies. That said, a number of

areas were identified in the detailed development chapters 5 and 6, where further methodological development would enhance the acceptability of the methods. Sections 8.3.2 to 8.3.4 identify these areas in respect to the texture index, the transitivity index and *DICTION* analysis, respectively. Before turning to these methods, however, section 8.3.1 offers some thoughts regarding the future of readability formulas.

8.3.1 Readability formulas

Since the publication of Jones and Shoemaker's (1994) watershed review, a number of studies have continued to use readability formulas as a research instrument (e.g. Courtis, 1995; 1998; James and Wallschutzky, 1997; Smith and Richardson, 1999; Clatworthy and Jones, 2001 (see section 2.5.1)), while for the most part drawing attention to their limitations. The concentration of methodological critique on readability formulas has to some extent been a factor of the lack of available alternatives. Binkley (1988) makes this point in reflecting on the future of readability formulas. He argues that classic readability formulas serve an important purpose. They are intended to, and do predict, an approximate level of difficulty (p. 117). The problems emerge, Binkley argues, when critics expect readability formulas to do more than they are able to do (p. 117). Having set readability formulas in their proper context as methods of analysis in the accounting domain, the call was given to readability researchers to develop alternative methods. With the development of alternatives such as the texture index and complimentary approaches such as the transitivity index (readability, transitivity and texture all embrace the syntactic dimension (texture also embraces the thematic dimension)), readability formulas can be used as one of a portfolio of approaches rather than the sole measure of textual difficulty. Perhaps Binkley's assessment made over ten years ago will prove to be right.

8.3.2 Texture index

The interpretation of indexical scores was discussed in section 5.7 (see also, section 7.7.2). In relation to the vertical summation of indexical scores, no attempt was made to attach an interpretation to the arithmetic total summed across indexicals. This issue could be investigated through eliciting user responses to each of the constructs captured by the indexicals, with a view to weighting the indexicals for cross summation. Such a project might also fruitfully address the issue as to whether there is a 'desirable' level of texture for accounting narratives. This would give rise to benchmark scores similar to those used as a referent for readability formulas.

A feature of the texture index is the manual coding method employed. This was a particular focus in relation to the critique of the texture index in terms of its satisfaction of the assessment criteria of validity and reliability (section 5.9). The detailed decision rules developed for each indexical, together with the categorical scoring approach, constitute a sufficient degree of objectivity to move forward. Further research, however, might consider the use of computerised coding for aspects of the texture index, as a means of enhancing objectivity.

The critique of the texture index in the context of the framework of recognised methodological assessment criteria in section 5.9, highlighted a particular issue to be addressed further through empirical application. The issue concerns the linking of texture and the constructs captured by the component indexicals, with impression management. This was identified as a factor both for face validity and for hypothesis validity (a component of external validity). While the analysis and discussion in section 7.7.2, go some way towards establishing this link, as indicated in section 5.9, a more extensive body of empirical evidence will be necessary in order to make any definitive claims in this regard.

Predictive validity, a component of external validity, is concerned with whether the findings in a particular study correspond to actual events. Section 8.4 below reflects on the potential for using the texture index in bankruptcy prediction studies, where the criterion of predictive validity can be assessed. Stability, as a factor of reliability, is concerned with the degree of variance in coding over time. Future studies using the texture index in empirical application will allow the question of stability to be addressed.

8.3.3 Transitivity index

The transitivity index developed in this study for use in accounting applications employs a manual approach to analysis (section 6.2.2). Computerised alternatives such as those found in the readability statistics of most word-processing packages were considered, but weaknesses in terms of face validity call into question the use of computerised readability statistics for passive quantification as a research instrument. The close correspondence in chapter 7 (section 7.7.3 and Table 7.11) between the results based on the manual analysis and those from the computerised analysis do provide some indication that the computerised method can be used as a yardstick. The small sample size in the empirical application in this study mitigates against drawing

definitive conclusions in this regard. Moreover, while the results are similar in terms of levels of significance, the absolute values are different. A more comprehensive empirical application as a matter for further research will allow a more precise understanding of the relationship between the manual and the computerised approaches (section 6.2.4). It might also be fruitful to investigate the validity of computerised methods of passive quantification in word-processing packages other than Word 7.0, which was used in this study.

The attraction of the computerised method with the benefits of objectivity might be better served by taking the manual approach and automating it where appropriate, rather than accepting the limitations of the existing computerised approaches. This would be a fruitful but separate research project. Further research might also fruitfully investigate the extent to which agent phrases are included or omitted and the rationale for omission (see section 6.2.4).

Section 6.2.4 highlighted external predictive validity and stability, as a factor of reliability, as matters for further research. Section 8.4 below reflects on the potential for using the transitivity index in bankruptcy prediction studies, where the criterion of predictive validity can be assessed. Stability, as a factor of reliability, is concerned with the degree of variance in coding over time. Future empirical studies using the transitivity index will allow the question of stability to be addressed.

8.3.4 *DICTION* analysis

In developing the model for accounting applications (section 6.3.7) a number of issues were identified in relation to further methodological development. The first issue concerns the derivation of scores for master variables. These are computed on the basis of z-scores. This is necessary because the scores for the component variables based on dictionary scores, and the scores for calculated component variables, are computed on a different basis. The outputs cannot be aggregated without first being standardised. *DICTION* standardises on the basis of z-scores. The issue identified is that the z-scores are computed with reference to the mean score for the particular variable across the entire text corpus upon which *DICTION* is based (approximately twenty thousand texts). While the application reported in chapter 7 relied on these standard default scores, there is potential for refinement in relation to accounting applications in constructing z-scores independent of *DICTION* and computing master variable scores based on these revised z-scores.

Apart from the adjusted 'certainty' formula (following Ober *et al.* (1999)), the empirical application in this study uses the standard *DICTION* formulas, without adjustment. From a preliminary review, there do not appear to be strong semantic grounds for making adjustments in terms of deleting variables from the formulas, as was the case with the 'certainty' formula. There is, however, potential for adding to the formulas through the addition of word lists. The point here is more general and concerns the addition or customisation of word lists in order to reflect what was termed in section 6.3.7 'accounting language'. The extent to which what might be termed 'accounting literature' forms the database for *DICTION*, is limited (see discussion of normative values in section 6.3.5 and Table 6.11). This process of refinement would also adjust for any bias in the particular idiom of English that is used. The majority of texts that constitute the existing *DICTION* database are US based and therefore reflect American Standard English.

In section 6.3.8 the issue of construct validity as a factor of external validity was identified as a matter for further research. In this regard, a fruitful research project might compare the results from *DICTION* with other form-oriented approaches in the literature, for example the method used by Smith and Taffler (2000). Finally, predictive validity was identified in section 6.3.8 as a matter for further research. Section 8.4 following reflects on the potential for using *DICTION* analysis in bankruptcy prediction studies, where predictive validity can be gauged.

8.4 Using the methods in empirical applications

The illustrative empirical application in this study has demonstrated the potential of the methods developed in this study for use in empirical studies. Realising that potential is a matter for future research. Moreover, the purpose of the application in this study was to illustrate across the range of what is available, rather than to provide an exhaustive empirical analysis. In this regard, for example, the application here exploits only the vertical summation of indexical scores (section 7.2). The analysis of horizontal patterns of texture, including the dimension of variability, is a matter for further research.

Further empirical research will explore more precisely the nature of differentiation and in what contexts the presence or absence of differentiation can be considered an impression management strategy (section 7.9). This would involve the detailed

investigation of different textual dimensions in the context of tests of differentiation in a large sample.

One particular application identified in the study would be to use the methods in a bankruptcy prediction context (sections 5.9, 6.2.4, 6.3.8). This would also facilitate in the assessment of predictive validity (see also, sections 8.3.2, 8.3.3 and 8.3.4).

While the study has focused on the development of methods with a view to investigating impression management, and has selected and developed methods that are particularly appropriate in this regard, there is considerable potential for using the methods in studies whose focus is other than impression management. In chapter 1, Table 1.3, based on Jones and Shoemaker (1994), the range of research into accounting narratives was highlighted. Only a sub-set of these issues relates to the investigation of impression management (section 1.5).

8.5 Developing further methods

In section 4.4, the methods to be developed in this study were identified with some introductory comments by way of justification. The texture index, transitivity index and *DICTION* analysis were selected in the context of a comprehensive review of the literature where a number of areas of weakness and gaps were identified and in light of the expressed orientation towards the investigation of impression management. It was not claimed that these methods were the only methods that might potentially be developed. They are, in the opinion of the author and for the reasons justified in this study, the most suitable for accounting researchers investigating impression management. The potential for further methodological development, beyond those methods developed in this study, is considered in sections 8.5.1 and 8.5.2 below. Section 8.5.1 considers the potential for exploiting methods in the managerial business communications literature. Section 8.5.2 extends the scope to encompass the applied linguistics literature. These two sources identified as offering potential for development build on the two lines of development pursued in this study (section 4.6).

8.5.1 Exploiting methods in the managerial business communications literature

The transitivity index and *DICTION* analysis were developed from the managerial business communications literature. A recent trend in that literature, in particular *The Journal of Business Communication*, which has emerged as an interface between the accounting and managerial literatures (sections 1.3 and 4.3), has seen the development

of methods of text evaluation which offer potential to the accounting researcher. Underlying this trend, is a shift in the academic discipline of linguistics, which has seen a movement away from a formalist approach to a concern for the development of usable methods of analysis for use in the wider communities of social scientific research (section 4.3). Given the importance of narratives in the accounting domain, accounting researchers must continue to exploit these developments as they emerge.

Of the methods identified in section 4.3 as offering the potential for development, only one aspect of Thomas' (1997) approach to linguistic analysis is exploited. Moreover, there are aspects of Hyland's (1998a) metadiscourse analysis, and not embraced by the texture index and *DICTION* analysis, which are not exploited in this study. In relation to Thomas' approach, there is potential for developing methods in relation to verb choice (the first dimension of transitivity) and thematic structure (sections 4.3.1, 4.4 and 6.2.1). The potential for further development in terms of metadiscourse analysis relate to interpersonal metadiscourse (sections 4.3.2 and 4.4).

8.5.2 Interdisciplinarity with applied linguistics

The texture index developed in this study is drawn from the applied linguistics literature. Although as discussed above, insights from the applied linguistics literature often find expression in the managerial business communications literature, the applied linguistics literature itself offers significant potential to the accounting researcher. There are considerable benefits for the accounting researcher who works at the front line of developments in a discipline whose specialism is text evaluation, particularly given the shift from the formalist to the functionalist approach referred to in section 8.5.1 above. As indicated in section 4.3, the studies by Llewellyn (1999) and Gallhofer *et al.* (2001) have exploited the potential for interdisciplinarity with applied linguistics.

8.6 Towards an holistic approach to text analysis

Typically, empirical studies have focused on only a single dimension of narrative construction or a limited set of dimensions. This raises the problem of partiality of analysis and the resultant difficulty of drawing definitive conclusions vis-à-vis communicative effectiveness or the deployment of impression management strategies. A particular dynamic of the texture index is that it embraces both syntactic analysis and elements of meaning-oriented thematic analysis in a single approach. Moreover, and more generally, the methods developed in this study, responding to areas of weakness and gaps identified in the literature, offer the potential to the accounting researcher of

investigating textual dimensions that hitherto have received relatively little attention in the accounting literature. This expansion in the portfolio of available approaches represents a significant shift towards a holistic evaluation of accounting narratives.

There is also potential for exploiting the text-focused methods reviewed and developed in this study alongside more qualitative approaches in applied linguistic analysis, such as critical discourse analysis. Gallhofer *et al.'s* (2001) detailed exegesis and application of critical discourse analysis in an accounting context indicates the potential for such an approach to function as an all-embracing context for a holistic evaluation. Such an evaluation might embrace not only the plethora of narrative-based methodologies, but also those methods used for investigating impression management in the graphical and visual discourses in corporate reports. A further step would be to embrace those methods used for investigating earnings management, thus raising the possibility of an holistic analysis of, say, the entire communicative context of the corporate report.

8.7 Limitations of this study

In discussing the limitations of this study, three principal spheres of limitation can be identified. The first concerns the impression management literature and, in particular, the problematic of synthesising what might be termed a theory of impression management. The second sphere of limitation concerns the methods developed in this study and, in particular, issues of application and interpretation associated with the texture index and *DICTION* analysis. Finally, the particular focus on investment trust companies in the empirical application reported in chapter 7 raises a number of issues with regard to the interpretation and generalisability of findings. The three spheres of limitation will be considered in sections 8.7.1 to 8.7.3 respectively.

8.7.1 Synthesising a theory of impression management

The methods developed in this study were developed specifically with a view to investigating impression management. This was in recognition of the increasing importance of accounting narratives, and the emerging body of literature suggestive of the view that managements engage in impression management strategies in their discretionary narrative disclosures. The impression management literature was contextualized as an extension of the accounting numbers management or earnings management literature, with its focus predominantly on the financial statements, to embrace the wider documentary contexts of the corporate report, namely the narrative, graphical and visual disclosures. In this regard, chapter 3 offered a review of the

impression management literature. The purpose of the review was three-fold: first, to synthesise the empirical literature; second, to identify gaps and areas of weakness in terms of allocation of attention that might potentially be exploited; and third, to identify the dominant research designs and measurement models in the extant literature, as a referent for the development of new methods (see section 3.1). While some robust conclusions were able to be drawn in relation to the second and third of these stated purposes (see sections 3.7 and 3.8), with regard to the first and arguably primary purpose, it is difficult at this stage to synthesise an impression management theory that gives rise to clear predictions regarding empirical observations. A contrast can be made here with the earnings management literature where a more robust theory has been developed.

The problematic of synthesising a theory of impression management can be illustrated with regard to the investigation of differentiation between the narratives of 'good performers' and 'poor performers'. The investigation of differentiation is perhaps the dominant focus of the empirical literature and as such was used as the basis for the illustrative empirical application reported in chapter 7 (see also sections 3.7 and 3.8). While it might be predicted that higher levels of readability and a greater prevalence of external attributions in the narratives of 'poor performers' (i.e. the *presence of differentiation*) are realisations of managerial intention to manage impressions, equally, it might be surmised that the *absence of differentiation* in relation to aspects of thematic content are realisations of impression management strategies whereby 'poor performers' provide signals which imitate 'good performers' (see discussion in sections 3.7 (also 7.7.1)). This complexity is mirrored in the methods developed in this study, where both the presence and absence of differentiation were associated with impression management. For example, it was argued that higher levels of transitivity in the narratives of 'poor performers' are realisations of managerial intention to manage impressions (sections 6.2.1 and 7.7.3). With regard to texture and *DICTION* variables, while it is difficult at this stage to develop what are more than tentative predictions as to how the individual indexicals, overall texture and the *DICTION* variables might be exploited in impression management strategies, it was argued that the different variables may function differently vis-à-vis differentiation as evidence of impression management (see sections 5.4 and 7.7.1 for texture and sections 6.3.4 and 7.7.4-8 for *DICTION* (see also here discussion in section 8.7.3 following)).

Reference was made above to the earnings management literature, where a more robust theory has been developed. The locus of empirical investigation in the earnings management literature is the financial statements, where accounting concepts are articulated in what we might describe as 'accounting language' (see, for example, Lavoie, 1987; Belkaoui, 1995). It can be argued that the nature of numerate 'accounting language' is such that a robust theory can be developed which gives rise to clear predictions regarding empirical evidence. When the focus shifts from the financial statements to the discourses that constitute the wider documentary contexts of the corporate report, then the mode of expression changes. For example, accounting narratives are accounting concepts expressed in natural language. The empirical investigation of such a context must embrace the considerable complexity of natural language in order to maintain validity in analysis. A degree of caution must be observed, therefore, when making comparisons with earnings management theory. Looking to the future, it may be that in developing a robust theory of impression management, such inherent complexity must be accommodated, where predictions and testable hypotheses will be developed, for example, in relation to the particular narrative dimension that is the focus of attention.

The investigation of differentiation in the narratives of 'good performers' and 'poor performers' presents further problems. In particular, there is a working assumption in the literature that such a comparison is the appropriate context for investigating impression management. This assumes, for example, a homogeneous reporting strategy for 'good performers' and 'poor performers' respectively, ignoring differentiation within these groupings. Further research will have to interrogate such an assumption. Moreover, the literature is yet to take the additional step of investigating the extent to which the particular impression management strategies used by managements actually influence decisions. In other words, if it is hypothesised that a particular strategy is used to manage impressions, then the realisation of that strategy in the text is not sufficient to conclude that the management of impressions has been achieved.

Taking these issues and limitations together, there is a need for further research to synthesise what might be termed a theory of impression management. As well as the particular avenues of enquiry identified in the discussion above, the literature would benefit from a body of theoretical and reflective work, which would explore and articulate for an accounting context, the theoretical underpinnings of what is embraced by the term 'impression management'.

8.7.2 The texture index and *DICTION* analysis: issues of application and interpretation

The second sphere of limitation relates to the methods developed in the study and, in particular, issues of application and interpretation associated with the texture index and *DICTION* analysis. While these issues were discussed in some detail in sections 5.9 (texture index), 6.3.7 and 6.3.8 (*DICTION* analysis), the principal limitations are summarised in the discussion following.

The texture index was developed as a direct alternative to text-focused readability formulas such as Flesch, which hitherto have been the dominant methods of syntactic analysis in the accounting literature. The particular strengths of the texture index when compared to readability formulas are validity and the potential for a sophisticated level of analysis, embracing a number of textual dimensions not embraced by readability formulas. Strength in face validity, as the fundamental validating criterion, is of particular importance. The limitations of the texture index are the labour intensive and subjective nature of the approach, factors which are particular strengths of readability formulas. While the detailed decision-rules for application and categorical scoring approach go some way towards addressing issues of subjectivity with the texture index, it is acknowledged that there remains a degree of latitude in the researcher's interpretation. Further, it is difficult at this stage to attach a precise interpretation to absolute texture scores, either for individual indexicals or overall texture and to justify a simplistic amalgamation of individual indexical scores as a measure of 'overall' texture. The issues of interpretation become more problematic were the texture index to be employed in research designs other than tests of differentiation (see Sydserff and Weetman, 1999). A number of the limiting factors associated with the texture index approach were discussed in the context of matters for further research (section 8.3.2).

Turning to *DICTION* analysis, unlike the texture and transitivity indices, which necessitated the development of detailed rules for application to an accounting context, together with extensive worked examples, *DICTION* was used largely without adaptation. Recognising its potential for accounting applications, particularly the investigation of impression management, its objectivity through computerised analysis, its rigorous development through the specialist discipline of applied linguistics and its independent attestation with regard to theoretical and methodological validity, the expressed intention of this study was to describe and illustrate the *potential* of *DICTION*

analysis for use in accounting applications (see discussion in sections 6.1 and 6.3.7). That said, it is important to recognise that in terms of the development and illustration in this study, a number of issues were not explored in detail. For example, the taxonomies upon which *DICTION* is based are developed exclusively from American English texts. Moreover, the use of what we might describe as accounting or business texts in developing these taxonomies is limited. *DICTION* generates master variable scores based on the amalgamation of scores for individual word-lists or dictionaries, which are categorised as either additive or subtractive variables. Were *DICTION* to become established in the accounting domain, these details of allocation and construction would require to be interrogated in some detail, to ensure the appropriateness for accounting narratives. The low word counts for component variables observed in the illustrative application (see Tables 7.13, 7.15, 7.17, 7.19 and 7.21) suggest that without the general to specific adaptation that recognises the particular character of accounting narratives, the full potential of *DICTION* for use by accounting researchers may not be realised. In summary, while it is clear that *DICTION* has considerable potential for use in accounting applications, it will have to be embraced with a fair degree of critical evaluation. In this regard, a number of the limiting factors discussed both here and in the relevant sections in the detailed development chapter, were identified as matters for further research (see section 8.7.3).

8.7.3 Focus on investment trusts

The third sphere of limitation relates to the particular focus on investment trust companies in the empirical application reported in chapter 7 and, in particular, issues with regard to the interpretation and generalisability of findings.

The rationale for selecting investment trust companies as the basis for the illustrative empirical application was discussed in detail in sections 4.8.1, 4.8.2 and 7.3. To summarise, the central thrust of the argument centred on the appropriateness of investment trust companies and the associated accounting narratives, as a focus for a methodologically oriented study. This reflects the stated primary purpose of the study. There are however, a number of limitations associated with this data set.

The particularity of investment trusts is reflected in the narrative character of the Chairman's statement and the industry-specific Manager's report. Developing the methods, particularly the texture index, in the context of these narratives, may impede the ability to apply the methods without further adaptation in empirical applications

beyond investment trust companies. This is of particular relevance to the indexical 'topicality'.

The small number of trusts included in the empirical application and the lack of significant differentiation in terms of financial performance between the 'good performers' and 'poor performers' are limiting factors in interpreting results. Typically, empirical studies using tests of differentiation have focused on sets of 'good performers' and 'poor performers' exhibiting a more marked performance differential than those used in this study. The dominant finding in the empirical application was the absence of performance-related differentiation. The lack of performance differentiation between the sets may be a significant contributory factor to these results. This in turn makes it problematic to conclude on the functioning of the particular dimensions investigated in the context of a developing theory of impression management (see also discussion in section 8.7.1 above).

8.8 Implications of this study

This study has responded to a general and specific call in the literature to develop methods for use by accounting researchers investigating impression management in accounting narratives. The methods developed represent a significant expansion in the portfolio of available approaches. While the methods have been developed and illustrated with particular regard to the investigation of impression management, their potential extends beyond the investigation of impression management to encompass a more general application. The study embodies an interdisciplinary ethos, in developing methods which are grounded in the specialist literature of applied linguistics. The attraction to the accounting research community lies in the strength of validity of these methods, a factor of their development in a discipline whose specialism is the evaluation of text. The usability of these methods within the wider community of social scientific research, which embraces the accounting research community, reflects a shift from a formalist to a functionalist paradigm in the discipline of linguistics. Building the interdisciplinary bridge, not only benefits the accounting research community, but can offer to the linguistics literature empirical data which can in turn be used to refine the methods for particular discourse communities such as accounting. As the accounting research community comes to terms with the emerging business reporting dynamic and the associated increasing importance of the narrative reporting medium, then exploiting and building on the interdisciplinary ethos that lies at the heart of this study, will be critical.

The implications of this study for accounting and auditing policy and practice lie in the rigour of the approaches and the potential they offer to the accounting researcher, as part of an expanding portfolio of approaches, to embrace a more sophisticated and holistic level of analysis. Building a body of empirical evidence using this portfolio of approaches, for example in relation to the investigation of impression management, will offer a significant and valuable contribution to accounting and auditing policy-makers. In particular, and of contemporary relevance, a valuable contribution can be made to the debates on expanding audit reporting scope to encompass the wider documentary contexts of the corporate report and the question of shifting from best-practice to mandatory 'OFR-type' disclosures. It is likely that a shift to mandatory narrative disclosure will involve redrafting of extant guidance on narrative reporting. Again, this study, through the rigorous linguistic theory that has underpinned the development of methods and the resultant increased understanding of what is involved in the communicative context of accounting, will make a significant contribution.

REFERENCES

Abrahamson, E. and Amir, E. (1996), "The information content of the President's letter to shareholders", *Journal of Business Finance and Accounting,* Vol. 23, No. 8, pp. 1157-1182.

Abrahamson, E. and Park, C. (1994), "Concealment of organizational outcomes: an agency theory perspective", *Academy of Management Journal,* Vol. 37, No. 5, pp. 1302-1334.

Acland, D. (1976), "The effects of behavioural indicators on investor decisions: an exploratory study", Accounting, Organizations and Society, Vol. 1, Nos. 2, 3, pp. 133-142.

Adelberg, A.H. (1979), "Narrative disclosures contained in financial reports: means of communication or manipulation", *Accounting and Business Research,* Vol. 9, No. 35, pp. 179-189.

Adelberg, A.H. (1983), "The accounting syntactic complexity formula: a new instrument for predicting the readability of selected accounting communications", *Accounting and Business Research*, Vol. 13, No. 51, pp. 163-175.

Aerts, W. (1994), "On the use of accounting logic as an explanatory category in narrative accounting disclosures", *Accounting, Organizations and Society*, Vol. 19, Nos. 4/5, pp. 337-353.

Aerts, W. (2001), "Inertia in the attributional content of annual accounting narratives", *European Accounting Review,* Vol. 10, No. 1, pp. 3-32.

AITC (1995), *Financial Statements of Investment Trust Companies,* Statement of Recommended Practice, Association of Investment Trust Companies.

AITC (2000), *Guide to Good Practice for the Report & Accounts of Investment Trust Companies,* Association of Investment Trust Companies.

Allard, L. and Ulatowska, H.K. (1991), "Cohesion in written narrative and procedural discourse of fifth-grade children", *Linguistics and Education*, Vol. 3, pp. 63-79.

APB (1994), *The Audit Agenda*, Auditing Practices Board.

APB (1995), *Other Information in Documents Containing Audited Financial Statements,* Statements of Auditing Standards 160, Auditing Practices Board.

APB (1996a), *The Audit Agenda – Next Steps,* Auditing Practices Board.

APB (1996b), *The Auditor's Code*, Auditing Practices Board.

APB (1999a), *Other Information in Documents Containing Audited Financial Statements,* Statements of Auditing Standards 160 (exposure draft), Auditing Practices Board.

APB (1999b), *Other Information in Documents Containing Audited Financial Statements,* Statements of Auditing Standards 160 (revised), Auditing Practices Board.

Arthur Anderson (1996). *What's the Story? A Survey of Narrative Reporting in Annual Reports*, Arthur Andersen, London.

ASB (1993), *Operating and Financial Review*, Statement, Accounting Standards Board, UK.

ASB (2000), *Year-End Financial Reporting Structure: Discussion Paper*, Accounting Standards Board.

Ashbaugh, H., Johnstone, K.M., and Warfield, T.D. (1999), "Corporate reporting on the internet", *Accounting Horizons*, Vol. 13, No. 3, pp. 241-257.

Baker, H.E. and Kare, D.D. (1992), "Relationship between annual report readability and corporate financial performance", *Management Research,* Vol. 15, pp. 1-4.

Barnes, P. and Brown, C. (1981), "What the chairmen say - a help or hindrance?" *Accountancy*, Vol. 92, pp. 161-162.

Bartlett, S.A. and Chandler, R.A. (1997), "The corporate report and the private shareholder: Lee and Tweedie twenty years on", *British Accounting Review,* Vol. 29, No. 3, pp. 245-261.

Beattie, V.A. (Ed.) (1999), *Business Reporting: The Inevitable Change?*, The Institute of Chartered Accountants of Scotland.

Beattie, V.A. (2000), "The future of business reporting: a review article, *Irish Accounting Review*, Vol. 7, No. 1, pp. 1-36, 2000.

Beattie, V.A. and Jones, M.J. (1992a), *The Communication of Information Using Graphs in Corporate Annual Reports*, ACCA Research Report, No. 29.

Beattie, V.A. and Jones, M.J. (1992b), "The use and abuse of graphs in annual reports: a theoretical framework and empirical study", *Accounting and Business Research,* Vol. 22, No. 88 (Autumn), pp. 291-303.

Beattie, V.A. and Jones, M.J. (1993), "Effect of graphical presentations on insights into a company's financial position – an innovative educational approach to communicating financial information in financial reporting: a comment", *Accounting Education*, Vol. 2, No. 4, pp. 303-309.

Beattie, V.A. and Jones, M.J. (1994a), "An empirical study of graphical format choices in charity annual reports", *Financial Accountability and Management,* August 1994, Vol. 10, No. 3, pp. 215-236.

Beattie, V.A. and Jones, M.J. (1994b), "Information design and manipulation: the case of financial graphs in corporate annual report", *Information Design Journal,* Vol. 7, No. 3, pp. 211-226.

Beattie, V.A. and Jones, M.J. (1996), *Financial Graphs in Corporate Annual Reports: A Review of Practice in Six Countries,* Institute of Chartered Accountants in England and Wales, London.

Beattie, V.A. and Jones, M.J. (1997), "A comparative study of the use of financial graphs in the corporate annual reports of major U.S. and U.K. companies", *Journal of International Financial Management and Accounting,* Vol. 8, No. 1, pp. 33-68.

Beattie, V.A. and Jones, M.J. (1998), *Graphical Reporting Choices: Communication or Manipulation?* Certified Research Report 56, Certified Accountant Publications Ltd., London.

Beattie, V.A. and Jones, M.J. (1999), "Australian financial graphs: an empirical study", *Abacus,* Vol. 35, No. 1, pp. 46-76.

Beattie, V.A. and Jones, M.J. (2000a), "Changing graph use in corporate annual reports: a time series analysis", *Contemporary Accounting Research,* Vol. 17, No. 2, pp. 213-226.

Beattie, V.A. and Jones, M.J. (2000b), "Impression management: the case of inter-country financial graphs", *Journal of International Accounting, Auditing and Taxation,* Vol. 9, No. 2, pp. 159-183.

Beattie, V.A. and Jones, M.J. (2001), "International financial graphs: a six country comparison", *The International Journal of Accounting*, Vol. 36, No. 2, pp. 195-122.

Belkaoui, A. (1995), *The Linguistic Shaping of Accounting,* Quorum Books: West Port, Connecticut.

Bettman, J.R. and Weitz, B.A. (1983). Attributions in the Board Room: Causal Reasoning in Corporate Annual Reports. *Administrative Science Quarterly,* 28, 165-183.

Binkley, M.R. (1988), "New ways of assessing text difficulty", I. Zabaluk, B.L. and Samuels, S.J. (Eds.), *Readability: It's Past, Present and Future,* International Reading Association, Inc., pp. 98-120.

Bowman, E.H. (1976), "Strategy and the weather", *Sloan Management Review,* Vol. 17, No. 2, pp. 49-62.

Bowman, E.H. (1978), "Strategy, annual reports and alchemy", *California Management Review*, Vol. 20, No. 3, pp. 64-71.

Brown, A.D. (1997), "Narcissism, identity, and legitimacy", *Academy of Management Review*, Vol. 22, pp. 643-686.

Brown, P. (2000), "Future disclosures", *Pacific Accounting Review*, Vol. 11, No. 2, pp. 49-54.

Bryan, S.H. (1997), "Incremental information content of required disclosures contained in Management Discussion and Analysis", *The Accounting Review*, Vol. 72, No. 2, pp. 285-301.

Butler, C. (1985), *Systematic Linguistics: Theory and Applications,* London: Batsford Academic and Educational.

Cameron, C.A., Lee, K., Webster, S., Munro, K., Hunt, A.K. and Linton, M.J. (1995), "Text cohesion in children's narrative writing", *Applied Psycholinguistics*, Vol. 16, pp. 257-269.

Carter, R., Goddard, A., Reah, D., Sanger, K. and Bowring, M. (1997), *Working with Texts: A Core Book for Language Analysis,* Routledge, London and New York.

Carter, S.M. and Dukerich, J.M. (1998), "Corporate responses to changes in reputation", *Corporate Reputation Review*, Vol. 1, pp. 250-270.

Clapham, S.E. and Schwenk, C.R. (1991), "Self-serving attributions, managerial cognition, and company performance", Strategic Management Journal, Vol. 12, pp. 219-229.

Clarke, G. and Murray, L.W. (2000), "Investor relations: perceptions of the annual statement", *Corporate Communications: An International Journal*, Vol. 5, No. 3, pp. 144-151.

Clatworthy, M. and Jones, M.J. (1997), "Accounting narratives: the future is rosy", *Management Accounting*, Vol. 75, No. 7, p. 46.

Clatworthy, M. and Jones, M.J. (1999), "Annual reporting: room for improvement?", *Management Accounting*, Vol. 77, No. 4, pp. 43-44.

Clatworthy, M. and Jones, M.J. (2001), "The effect of thematic structure on the variability of annual report readability", *Accounting, Auditing & Accountability Journal*, Vol. 14, No. 3, pp. 311-326.

Core, J.E. (2001), "A review of the empirical disclosure literature: discussion", *Journal of Accounting and Economics,* Vol. 31, pp. 441-456.

Courtis, J.K. (1982), "Private shareholder response to corporate annual reports", *Accounting and Finance,* Vol. 22, No. 2, pp. 53-72.

Courtis, J.K. (1986), "An investigation into annual report readability and corporate risk-return relationships", *Accounting and Business Research,* Vol. 16, No. 64, pp. 285-194.

Courtis, J.K. (1995), "Readability of annual reports: Western versus Asian evidence", *Accounting, Auditing & Accountability Journal*, Vol. 8, No. 2, pp. 4-17.

Courtis, J.K. (1997), "Corporate annual report graphical communication in Hong Kong: effective or misleading?", *The Journal of Business Communication*, Vol. 34, No. 3, pp. 269-288.

Courtis, J.K. (1998), "Annual report readability variability: tests of the obfuscation hypothesis", *Accounting, Auditing & Accountability Journal*, Vol. 11, No. 4, pp. 459-471.

Crismore, A., Markannen, R. and Steffensen, M. (1993), "Metadiscourse in persuasive writing: a study of texts written by American and Finnish university students, *Written Communication,* Vol. 10, No. 1, pp. 39-71.

DTI (2001), *Modern Company Law for a Competitive Economy: Final Report, Vol. 1*, The Company Law Review Steering Group, Department of Trade and Industry, UK.

D'Aveni, R.A. and MacMillan, I.C. (1990), "Crisis and the content of managerial communications: a study of the focus of attention of top managers in surviving and failing firms, *Administrative Science Quarterly,* Vol. 35, pp. 634-657.

Davies, M., Paterson, R. and Wilson, A. (1999), *UK GAAP: Generally Accepted Accounting Practice in the United Kingdom,* 6th Edition, Butterworths, Tolley and Ernst & Young.

Day, J. (1986), "The use of annual reports by UK investment analysts", *Accounting and Business Research,* Vol. 16, No. 64, pp. 295-307.

de Beaugrande, R. and Dressler, W. (1981), *Introduction to Text Linguistics*, Longman, London and New York.

Debreceney, R. and Gray, G. (1999), "Financial reporting on the internet and the external audit", *European Accounting Review*, Vol. 8, No. 2, pp. 335-350.

Debreceney, R. and Gray, G. (2000), "The production and use of semantically rich accounting reports on the internet: XML and XBRL", *International Journal of Accounting Information Systems,* Vol. 1, No. 3.

Deegan, C. and Gordon, B. (1996). "A study of environmental disclosure practices of Australian companies", *Accounting and Business Research,* Vol. 26, pp. 187-199.

Deegan, C. and Rankin, M. (1996), "Do Australian companies report environmental news objectively? An analysis of environmental disclosures by firms prosecuted successfully by the Environmental Protection Authority", *Accounting, Auditing & Accountability Journal,* Vol. 9, No. 2, pp. 50-67.

Deegan, C. and Rankin, M. (1997), "The materiality of environmental information to users of annual reports", *Accounting, Auditing & Accountability Journal,* Vol. 10, No. 4, pp. 562-583.

Deller, D., Stubenrath, M. and Weber, C. (1999), "A survey of the use of the internet for investor relations in the USA, UK and Germany", *European Accounting Review,* Vol. 8, No. 2, pp. 351-364.

Dev, S. (1974), "Statements of company prospects", *Accounting and Business Research,* Vol. 4, No. 16, pp. 270-274.

Dreyer, L.G. (1984), "Readability and responsibility", *Journal of Reading*, January, pp. 334-338.

Dyckman, T.R. and Zeff, S.A. (2000), "The future of financial reporting: removing it from the shadows", *Pacific Accounting Review*, Vol. 11, No. 2, pp. 89-96.

Epstein, M.J. and Pava, M.L. (1993), *The Shareholders' Use of Corporate Annual Reports*, JAI Press Inc. : Greenwich, Connecticut).

FASB (2000), *Business Reporting Research Project: Electronic Distribution of Business Information,* Financial Accounting Standards Board.

Fairclough, N. (1995), *Critical Discourse Analysis*, Longman, London and New York.

Fawcett, R. and Halliday, M. (1978), *New Developments in Systematic Linguistics,* London: Batsford.

Frazier, K.B., Ingram, R.W. and Tennyson, B.M. (1984), "A methodology for the analysis of narrative accounting disclosures", *Journal of Accounting Research,* Vol. 22, pp. 318-331.

Frawley, W. (1992), *Linguistic Semantics,* Hillsdale, NJ: Erlbaum.

Frey L.R., Botan, C.H., Friedman, C.H. and Kreps, G.L. (1991), *Investigating Communication: An Introduction to Research Methods,* Englewood Cliffs, NJ: Prentice Hall.

Froud, J., Haslam, C., Johal, S., Shaoul, J, and Williams, K. (1998), "Persuasion without numbers? Public policy and the justification of capital charging in NHS trust hospitals", *Accounting, Auditing & Accountability Journal*, Vol. 11, No. 1, pp. 99-125.

Gallhofer, S., Haslam, J., Morrow, S. and Sydserff, R. (2000), "Accounting, transparency and the culture of spin: re-orientating accounting communication in the new millennium", *Pacific Accounting Review*, Vol. 11, No. 2, pp. 97-111.

Gallhofer, S., Haslam, J. and Roper, J. (2001), "Applying critical discourse analysis: struggles over takeovers legislation in New Zealand", *Advances in Public Interest Accounting: Advances in Accountability: Regulation, Research, Gender and Justice*, Vol. 8, pp. 121-155.

Gallhofer, S., Haslam, J. and Tsen, S-H. (1996), "What's wrong with green accounting and auditing prescription? Seeing the wood as well as the trees", *Irish Accounting Review*, Vol. 3, No. 1, pp. 69-89.

Gardner, W.L. and Avolio, B.J. (1998), "The charismatic relationship: a dramaturgical perspective", Academy of Management Review, Vol. 23, pp. 32-58.

Giles, T. (1990), "The readability controversy: A technical writing review", *Journal of Technical Writing and Communication,* Vol. 20, No. 2, pp. 131-8.

Graves, O.F., Flesher, D.L. and Jordan, R.E. (1996), "Pictures and the bottom line: the television epistemology of US annual reports. *Accounting, Organizations and Society,* Vol. 21, 57-88.

Gray, R.H., Bebbington, J. and Walters, D. (1993), *Accounting for the Environment*, London: Chartered Association of Certified Accountants and Chapman.

Gray, R., Kouhy, R. and Lavers, S. (1995), "Corporate social and environmental reporting: a review of the literature and a longitudinal study of UK disclosure", *Accounting, Auditing & Accountability Journal,* Vol. 8, No. 2, pp. 47-77.

Guthrie, J. and Parker, L. (1989), "Corporate social reporting: a rebuttal of legitimacy theory", *Accounting and Business Research,* Vol. 9, pp. 343-352.

Guthrie, J. and Parker, L. (1990), "Corporate social disclosure practice: a comparative international analysis", *Advances in Public Interest Accounting,* Vol. 3, pp. 159-176.

Hackston, D. and Milne, M.J. (1996), "Some determinants of social and environmental disclosures in New Zealand companies", *Accounting, Auditing & Accountability Journal,* Vol. 9, No. 1, pp. 77-108.

Halliday, M.A.K. (1976), *System and Function in Language.* London: Oxford University Press.

Halliday, M.A.K. (1978), *Language as Social Semiotic,* London: Edward Arnold.

Halliday, M.A.K. (1985), *An Introduction to Functional Grammar,* Edward Arnold, London.

Halliday, M.A.K. (1987), "Spoken and written modes of meaning". In Horowitz, R. and Samuels, S.J. (Eds.), *Comprehending Oral and Written Language*, Academic, New York, pp. 55-82.

Halliday, M.A.K. and Hasan, R. (1976), *Cohesion in English*, Longman, London.

Halliday, M.A.K. and Hasan, R. (1989*), Language, Context and Text: Aspects of Language in a Social-Semiotic Perspective*, Oxford University Press.

Hart, R.P. (1997a), *DICTION 4.0: The Text Analysis Program CD-ROM and User's Manual,* Sage Publications Software, London.

Hart, R.P. (1997b), "Rhetoric, hope, and American politics". In Trent, J. (Ed.), *At the Helm in Speech Communication* (Boston: Allyn and Bacon).

Hart, R.P. (2000a), *DICTION 5.0: The Text Analysis Program,* Thousand Oaks, CA: Scolari/Sage.

Hart, R.P. (2000b), *Campaign Talk: Why Elections are Good for Us*, Princeton: Princeton University Press.

Hart, R.P. (2001), "Redeveloping *DICTION:* theoretical considerations", In M.D. West (Ed.), *Theory, Method, and Practice in Computer Content Analysis,* Westport, Connecticut and London: Ablex Publishing, pp. 43-60.

Hart, R.P. and Gourgey, H. (1998), "Accepting the political mantle: stylistic considerations", *Political Communication,* [special CD-ROM edition].

Hart, R.P. and Jarvis, S.E. (1997), "Political debate: forms, styles and media", *American Behavioural Sciences*, Vol. 40, pp. 1,085-1,122.

Harte, G., Lewis, L. and Owen, D. (1991), "Ethical investment and the corporate reporting function", *Critical Perspectives on Accounting,* Vol. 2, pp. 227-253.

Hasan, R. (1984), "Coherence and cohesive harmony". In Flood, J. (Ed.), *Understanding Reading Comprehension*, Deleware: International Reading Association, pp. 189-219.

Hatch, E. (1992), *Discourse and Language Education*, Cambridge University Press.

Hendricks, J.A. (1976), "The impact of human resource accounting information on stock investment decisions: an empirical study", *The Accounting Review*, Vol. 51, No. 2, pp. 292-305.

Hildebrandt, H.H. and Snyder, R. (1981), "The pollyanna hypothesis in business writing: initial results, suggestions for research", *The Journal of Business Communication,* Vol. 18, pp. 5-15.

Hoey, M. (1991), *Patterns of Lexis in Text*, Oxford University Press.

Holland, J. (1998), "Private voluntary disclosure, financial intermediation and market efficiency", *Journal of Business Finance & Accounting*, Vol. 25 Nos. 1/2, pp. 29-68.

Hopwood, A.G. (1996), "Making visible and the construction of visibilities: shifting agendas in the design of the corporate report: introduction", *Accounting, Organizations and Society,* Vol. 21 No. 1, pp. 55-6.

Houghton, K.A. (1988), "The measurement of meaning in accounting: a critical analysis of the principal evidence", *Accounting, Organizations and Society*, Vol. 13, No. 3, pp. 263-280.

Hyland, K. (1996a), "Talking to the academy: forms of hedging in scientific research articles", *Written Communication,* Vol. 13 No. 2, pp. 251-281.

Hyland, K. (1996b), "Writing without conviction? Hedging in scientific research articles", *Applied Linguistics*, Vol. 17, No. 4, pp. 433-454.

Hyland (1998a), "Exploring corporate rhetoric: metadiscourse in the CEO's letter", *The Journal of Business Communication*, Vol. 35, No. 2, pp. 224-245.

Hyland, K. (1998b), "Persuasion and context: the pragmatics of academic metadiscourse", *Journal of Pragmatics*, Vol. 30, pp. 437-455.

Hyland, K. (1999), "Talking to Students: metadiscourse in introductory coursebooks", *English for Specific Purposes: An International Journal*, Vol. 18, No. 1, pp. 3-26.

Hyland, K. (2000), *Disciplinary Discourses: Social Interactions in Academic Writing*, Longman, London.

IFAC (1993), *Other Information in Documents Containing Audited Financial Statements,* International Standard on Auditing 720, International Auditing Practices Committee, standing committee of the International Federation of Accountants.

Industrial Society (2001), *Company Law Review Research Project: Final Review,* The Industrial Society.

Ingram, R.W. and Frazier, F.B. (1983), "Narrative disclosures in annual reports", *Journal of Business Research,* March, pp. 49-60.

James, S. and Wallschutzky, I. (1997), "Tax law improvement in Australia and the UK: the need for a strategy for simplification", *Fiscal Studies*, Vol. 18, No. 4, pp. 445-460.

Johnson, J.R., Rice, R.R. and Roemich, R.A. (1980), "Pictures that lie: the abuse of graphs in annual reports", *Management Accounting,* October, pp. 50-56.

Jones, M.J. (1988), "A longitudinal study of the readability of the chairman's narratives in the corporate reports of a UK Company", *Accounting and Business Research*, Vol. 18, No. 72, pp. 297-305.

Jones, M.J. (1994), "A comment to contextualise 'performance and readability: a comparison of annual reports of profitable and unprofitable corporations' ", *The Journal of Business Communication,* Vol. 31, No. 3, pp. 225-230.

Jones, M.J. (1996a), "Accounting narratives: an emerging trend", *Accountancy* (April), pp. 41-42.

Jones, M.J. (1996b), "Readability of annual reports: Western versus Asian evidence – a comment to contextualize", *Accounting, Auditing and Accountability Journal,* Vol. 9, No. 2, pp. 86-91

Jones, M.J. (1997), "Methodological themes: critical appraisal of the cloze procedure's use in the accounting domain", *Accounting, Auditing & Accountability Journal*, Vol. 10, No. 1, pp. 105-128.

Jones, M.J. and Clatworthy, M. (2001), "Differential financial reporting patterns in accounting narratives: evidence from profitable and unprofitable companies", paper presented at the *European Accounting Association Annual Congress*, Athens, April 2001.

Jones, M.J. and Shoemaker, P.A. (1994), "Accounting narratives: a review of empirical studies of content and readability", *Journal of Accounting Literature*, Vol. 13, pp. 142-184.

Kaplan, S.E., Pourciau, S. and Reckers, P.M.J. (1990), "An examination of the effect of the President's letter and stock advisory service information on financial decisions, *Behavioural Research in Accounting,* Vol. 2, pp. 63-92.

Kent, P., Kwong, E. and Marshall, B. (1997), "Social responsibility and environmental disclosures: evidence from Australian chemical companies", *Accountability and Performance*, Vol. 3, No. 2, pp. 21-39.

Kirk, R. (1997), "The operating and financial review: some evidence of its implementation in Irish published accounts", *Irish Accounting Review,* Vol. 4, No. 1, pp. 75-96.

Kohut, G.F. and Segars, A.H. (1992), "The President's letter to stockholders: an examination of corporate communication strategy", *The Journal of Business Communication,* Vol. 29, pp. 7-21.

Krippendorf, K. (1980), *Content Analysis: An Introduction to its Methodology,* Newbury Park, CA: Sage Publications, Inc.

Lavoie, D. (1987), "The accounting of interpretations and the interpretation of accounts: the communicative function of 'the language of business'", *Accounting, Organizations and Society,* Vol. 12, pp. 579-604.

Leary, M.R. and Kowalski, R.M. (1990), "Impression management: a literature review and two component model", *Psychological Bulletin,* Vol. 107, pp. 34-47.

Lemke, J. (1989). "Intertextuality and text semantics". In Gregory, M. and Fries, P. (Eds.), *Discourse in Society: Functional Perspectives,* Norwood: NJ: Ablex, pp. 85-114.

Llewellyn, S. (1999), "Methodological themes: narratives in accounting and management research", *Accounting, Auditing & Accountability Journal,* Vol. 12, No. 2, pp. 220-236.

Lovejoy, K.B. (1991), "Cohesion and information strategies in academic writing: analysis of passages in three disciplines", *Linguistics and Education*, Vol. 3, pp. 315-43.

Lovejoy, K.B. and Lance, D.M. (1991), "Information management and cohesion in the study of written discourse", *Linguistics and Education*, Vol. 3, pp. 251-73.

Lymer, A., Debreceny, R, Gray, G. and Rahman, A. (1999), *Business Reporting on the Internet,* International Accounting Standards Committee.

Lyons, J. (1995), *Linguistic Semantics: An Introduction*, Cambridge: Cambridge University Press.

Marston, C.L. and Shrives, P.J. (1991), "The use of disclosure indices in accounting research: a review article", *British Accounting Review*, Vol. 23, pp. 195-210.

Martindale, B.C., Koch, B.S. and Karlinsky, S.S. (1992), "Tax law complexity: the impact of style", *The Journal of Business Communication*, Vol. 29, No 4, pp. 383-400.

Mather, P., Ramsay, A. and Serry, A. (1996), "The use and representational faithfulness of graphs in annual reports: Australian evidence", *Australian Accounting Review,* Vol. 6, pp. 56-63.

McCarthy, M. (1991), *Discourse Analysis for Language Teachers*, Cambridge University Press.

McConnell, D., Haslem, J.A. and Gibson, V.R. (1986), "The president's letter to stockholders: a new look", *Financial Analysts Journal,* Vol. 42, pp. 66-70.

McKinstry, S. (1996), "Designing the annual reports of Burton plc from 1930 to 1994", *Accounting, Organizations and Society,* Vol. 21, No. 1, pp. 89-111.

Means, T.L. (1981), "Readability: an evaluation criterion of stockholder reaction to annual reports", *The Journal of Business Communication* Vol. 24, pp. 19-27.

Milne, M.J. and Adler, R.W. (1999), "Exploring the reliability of social and environmental disclosures content analysis", *Accounting, Auditing & Accountability Journal,* Vol. 12, No. 2, pp. 237-256.

Milne, M.J. and Chan, C. (1999), "Narrative corporate social disclosures: how much of a difference do they make to investment decision-making?" *British Accounting Review,* Vol. 31, No. 4, pp. 439-457.

Morris (1994), "Computerized content analysis in management research: A demonstration of advantages and limitations", *Journal of Management,* Vol. 20, No. 4, pp. 903-931.

Neu, D., Warsame, H. and Pedwell, K. (1998), "Managing public impressions: environmental disclosures in annual reports", *Accounting, Organizations and Society,* Vol. 23, pp. 265-282.

Neuner, J.L. (1987), "Cohesive ties and chains in good and poor freshmen essays", *Research in the Teaching of English*, Vol. 21, pp. 92-102.

Nunan, D. (1993), *Introducing Discourse Analysis*, Penguin Books, London.

Ober, S., Zhao, J.J., Davis, R. and Alexander, M.W. (1999), "Telling it like it is: the use of certainty in public business discourse", *The Journal of Business Communication,* Vol. 36, No. 3, pp. 280-300.

Olsen, L.A. and Johnson, R. (1989), "Towards a better measure of readability: explanation of empirical performance results", *Word*, Vol. 40, Nos. 1-2, pp. 223-234.

OSC (1990), *Annual Information and Management Discussion and Analysis,* OSC Bulletin, Ontario Securities Commission, Ontario: Canada.

OSC (1992), *Annual Information and Management Discussion and Analysis,* OSC Bulletin, Ontario Securities Commission, Ontario: Canada.

Parker, L.D. (1982), "Corporate annual reporting: a mass communication perspective", *Accounting and Business Research,* Vol. 12, No. 4, pp. 279-286.

Patel, C. and Day, R. (1996), "The influence of cognitive style on the understandability of a professional accounting pronouncement by accounting students", *British Accounting Review,* Vol. 28, pp. 139-154.

Pava, M.L. and Epstein, M.J. (1993), "MD&A as an investment tool: user beware!" *Journal of Accountancy*, Vol. 175, pp. 51-53.

Percy, J.P. (1999), "Assurance services – visions for the future", *International Journal of Auditing,* No. 3, pp. 81-87.

Peterson, C. and Dodsworth, P. (1991), "A longitudinal analysis of young children's cohesion and noun specification in narratives", *Journal of Child Language,* Vol. 18, pp. 397-415.

Platt, C.J. (1979), "How reliable are profit forecasts", *Accountancy* (April), pp. 95-97.

Preston, A.M. and Young, J.J. (2000), "Constructing the global corporation and corporate constructions of the global: a picture essay", *Accounting, Organizations and Society,* Vol. 25, pp. 427-449.

Preston, A.M., Wright, C. and Young, J.J. (1996), "Imag[in]ing annual reports", *Accounting, Organizations and Society,* Vol. 21, pp. 113-137.

Richardson, , V.J. and Scholz, S. (2000), "Corporate reporting and the internet: vision, reality and intervening obstacles", *Pacific Accounting Review*, Vol. 11, No. 2, pp. 153-160.

Rogers, R.K. and Grant, J. (1997), "An empirical investigation of the relevance of the financial reporting process to financial analysts", Unpublished manuscript. Portland State University.

Roseberry, R.L. (1995), "A texture index: measuring texture in discourse", *International Journal of Applied Linguistics,* Vol. 5, No. 2, pp. 205-23.

Saeed, J.I. (1997), *Semantics,* Oxford: Blackwell Publishers.

Salancik, G.R. and Meindl, J.R. (1984), "Corporate attributions as strategic allusions of management control", *Administrative Science Quarterly*, Vol. 29, pp. 238-254.

Schipper, K. (1989), Commentary on Earnings Management. *Accounting Horizons*, Vol. 3, pp. 91-102.

Schleicher, T. and Walker, M. (1999), "Share price anticipation of earnings and management's discussion of operations and financing", *Accounting and Business Research*, Vol. 29, No. 4, pp. 321-335.

Schwan, E.S. (1976), "The effects of human resource accounting on financial decisions: an empirical test", *Accounting, Organizations and Society*, Vol. 1, Nos. 2, 3, pp. 219-237.

SEC (1987), *Securities Act Release No. 6711* (April 24), US Securities and Exchange Commission.

Schriver, K.A. (1989), "Evaluating text quality: the continuum from text-focused to reader-focused methods", *IEEE Transactions on Professional Communication,* Vol. 32, No. 4, pp. 238-55.

Scinto, L.F.M. (1984), "The architectonics of text produced by children and the development of higher cognitive functions", *Discourse Processes,* Vol. 7, pp. 371-418.

Scinto, L.F.M. (1986), *Written Language and Psychological Development*, Academic, New York.

Siegel, S. and Castellan, N.J. (1988), *Nonparametric Statistics for the Behavioural Sciences*, McGraw-Hill Book Co., USA.

Sikka, P. (1997), "Regulating the auditing profession". In Sherer, M. and Turley, S. (Eds). *Current Issues in Auditing*, Paul Chapman Publishing, pp. 129-145.

Smith, M. (1998), "Conflicting messages in annual reports", *Accountability and Performance*, Vol. 4, No. 2, pp. 43-60.

Smith, D. and Richardson, G. (1999), "The readability of Australia's taxation laws and supplementary materials: an empirical investigation", *Fiscal Studies*, Vol. 20, No. 3, pp. 321-249.

Smith, M. and Taffler, R. (1992a), "Readability and understandability: different measures of the textual complexity of accounting narrative", *Accounting, Auditing & Accountability Journal*, Vol. 5, No. 4, pp. 84-98.

Smith, M. and Taffler, R. (1992b), "The chairman's statement and corporate financial performance", *Accounting and Finance*, Vol. 32, pp. 75-90.

Smith, M. and Taffler, R. (1995), "The incremental effect of narrative accounting information in corporate annual reports", *Journal of Business Finance & Accounting,* Vol. 22, No. 8, pp. 1195-210.

Smith, M. and Taffler, R. (2000), "The Chairman's statement: a content analysis of discretionary narrative disclosures", *Accounting, Auditing & Accountability Journal*, Vol. 13, No. 5, pp. 624-46.

Staw, B.M., McKechnie, P.I. and Puffer, S.M. (1983), "The justification of organisational performance", *Administrative Science Quarterly,* Vol. 28, pp. 582-600.

Steele, A. (1982), "The accuracy of chairmen's non-quantified forecasts: an exploratory study", *Accounting and Business Research,* Vol. 12, pp. 215-230.

Steinbart, P.J. (1989), "The auditor's responsibility for the accuracy of graphs in annual reports: some evidence of the need for additional guidance", *Accounting Horizons,* September, 60-70.

Stevens, K.T., Stevens, K.C. and Stevens, W.P. (1992), "Measuring the readability of business writing: the Cloze procedure versus readability formulas", *The Journal of Business Communication,* Vol. 29, pp. 367-82.

Stoddart, S. (1991), *Texts and Texture: Patterns of Cohesion*, Norwood, NJ: Ablex.

Stotsky, S. (1983), "Types of lexical cohesion: implications for developing a vocabulary of academic discourse", *College Composition and Communication*, Vol. 37, pp. 276-93.

Subramanian, R., Insley, R.G. and Blackwell, R.D. (1993), "Performance and readability: a comparison of annual reports of profitable and unprofitable corporations", *The Journal of Business Communication,* Vol. 30, pp. 49-61.

Swales, G.S. (1988), "Another look at the president's letter to stockholders", *Financial Analysts Journal,* March-April, pp. 71-73.

Swales, J. (1990), *Genre Analysis: English in Academic and Research Settings*, Cambridge: Cambridge University Press.

Sydserff, R. (1998), "Image makers", *CA Student*, quarterly supplement to *CA Magazine,* Vol. 40, pp. 10-11.

Sydserff, R. and Weetman, P. (1999), "Methodological themes: a texture index for evaluating accounting narratives: an alternative to readability formulas", *Accounting, Auditing & Accountability Journal*, Vol. 12, No. 4, pp. 459-488.

Sydserff, R., Weetman, P. and Gordon, P. (2000), *Issues in Accounting: Auditing*, Heriot-Watt University Programme of Management Education, Heriot-Watt University and FT Knowledge.

Tennyson, B.M, Ingram, R.W. and Dugan, M.T. (1990), "Assessing the information content of narrative disclosures in explaining bankruptcy", *Journal of Business Finance and Accounting,* Summer, pp. 391-410.

Thomas, J. (1997), "Discourse in the marketplace: the making of meaning in annual reports", *The Journal of Business Communication*, Vol. 34, No. 1, pp. 47-66.

Tweedie, D. and Whittington, G. (1990), "Financial reporting: current problems and their implications for systematic reform", *Accounting and Business Research,* Vol. 21, pp. 87-102.

Unerman, J. (2000), "Methodological issues: reflections on quantification in corporate social reporting content analysis", *Accounting, Auditing & Accountability Journal,* Vol. 13, No. 5, pp. 667-80.

van Dijk, T. (1988), *News as Discourse*, Blackwell: Oxford, UK.

Virtanen, T. (1992), "Issues of text typology: narrative - a 'basic' type of text?" *Text*, Vol. 12, No. 2, pp. 293-310.

Wagner, J.A. and Gooding, R.Z. (1997), "Equivocal information and attribution: an investigation of patterns of managerial sensemaking", *Strategic Management Journal,* Vol. 18, No. 4, pp. 275-286.

Weber, R.P. (1990), *Basic Content Analysis* (2nd ed.)., Sage University Paper Series on Quantitative Applications in the Social Sciences, series no. 07-049, Newbury Park, CA: Sage Publications, Inc.

Weetman, P. and Collins, B. (1996), *Operating and Financial Review: Experiences and Exploration*, The Institute of Chartered Accountants of Scotland, Edinburgh, UK.

Weetman, P., Collins, B. and Davie, E. (1994), *Operating and Financial Review: Views of Analysts and Institutional Investors*, The Institute of Chartered Accountants of Scotland, Edinburgh, UK.

Weetman, P., Collins, B., MacNeill, A. and Davie, E. (1995), *Operating and Financial Review: A Survey of Compliance with the Spirit of the ASB's Guidance*, The Institute of Chartered Accountants of Scotland, Edinburgh, UK.

West (2001), "The Future of Computer Content Analysis: Trends, Unexplored Lands, and Speculations", In M.D. West (Ed.), *Theory, Method, and Practice in Computer Content Analysis,* Westport, Connecticut and London: Ablex Publishing, pp. 159-176.

Winter, E. (1979), "Replacement of a fundamental function of the sentence in context", *Forum Linguisticum,* Vol. 4, No. 2, pp. 95-133.

Wiseman, J. (1982), "An evaluation of environmental disclosures made in corporate annual reports", *Accounting, Organizations and Society,* Vol. 7, No. 1, pp. 53-63.

Witte, S.P. and Faigley, L. (1981), "Coherence, cohesion and writing quality", *College Composition and Communication*, Vol. 32, pp. 189-204.